



**ENVIRONMENTAL
COOPERATIVE AGREEMENT**

**ANNUAL
REPORT
2003**

**Blount
Station**

Madison, Wisconsin



your community energy company

INTRODUCTION

MGE signed an Environmental Cooperative Agreement (ECA) with the Wisconsin Department of Natural Resources (WDNR) on September 26, 2002. As a part of that ECA, MGE committed to providing the WDNR a Baseline Report by March 24, 2003, and annual performance evaluations thereafter. This is our first annual performance report.

During 2003, we met with our Community Environmental Advisory Group (CEAG) three times. We reviewed the ECA Baseline Report and the Preliminary Feasibility and Cost Evaluation of Emission Controls to Reduce Air Emissions at the Blount Generating Station, seeking and receiving their input. The format and content of this report reflects their suggestion for more quantitative information. We thank them for their dedication and interest in providing valuable feedback for us.

Section One of this report includes a summary of some of our more notable achievements. During the past year, we have actively worked to implement the commitments made in the ECA which move us beyond regulatory compliance. We have made excellent progress.

During 2003, we accomplished the following:

- **Prepared to increase our use of waste material as a fuel source**
- **Purchased bio-diesel fuel**
- **Finalized the combustion study on No. 8 Boiler**
- **Prepared data to submit to the WDNR Registry of significant voluntary emissions reductions**
- **Installed a storm water filtration demonstration project**
- **Implemented a noise concerns procedure**
- **Advertised our thermostat recycling program to contractors**
- **Explored options for beneficial ash use**
- **Completed a mercury inventory plan**
- **Completed PCB transformer testing**
- **Reviewed emission reductions for our diesel generators**
- **Installed pulsers on Boiler No. 8**

In addition, we have gone beyond our ECA commitments in adopting the “Dark Skies” lighting criteria for the Blount station yard, and further developed our renewable energy resources.

Section Two of this report includes an environmental assessment by an independent auditing firm. This assessment measured our compliance with the ECA commitments and our conformance with federal, state, and local environmental requirements.

The audit firm found MGE to be complying with our ECA commitments in all but two instances—one, failing to prepare a calculated six-month rolling average of emissions from burning PDF and two, failing to direct all communications through the designated liaisons. See the attached table of corrective actions which outlines actions MGE has taken or will take to correct any of the exceptions found during the audit.

TABLE OF CONTENTS

Introduction

Section 1 Environmental Cooperative Agreement (ECA) 2003 Performance Data

• 2003 MGE Power Sources.....	1
• 2003 MGE Electricity Fuel Sources	2
• Alternate Fuel Usage.....	3
• Bio-Diesel Fuel	4
• Regulated Emissions	5
• No. 8 Boiler Combustion Improvement Study	6
• WDNR Voluntary Emissions Reductions Registry	6
• Stormwater Demonstration Project.....	6
• Noise Procedure	6
• Mercury Thermostat Recycling for Building Contractors	6
• Beneficial Ash Use Report.....	7
• Mercury Inventory and Removal Plan.....	7
• PCB Transformer Replacement Plan	7
• Research Plan – Diesel Generator Emission Reductions.....	7
• Pulsers Installation	8
• Beyond ECA Initiatives	8
-Blount Lighting Improvements	8
-New Photovoltaic System.....	9
• Environmental Management System	9

Section 2 Compliance Audit Results and Corrective Action

- Introduction
- Audit Report
- Corrective Action

Appendix

- EPA Fact Sheet
- Stormwater Treatment Project Fact Sheet
- Van Breusegen & Associates, Inc., Statement of Qualifications
- Glossary of Acronyms

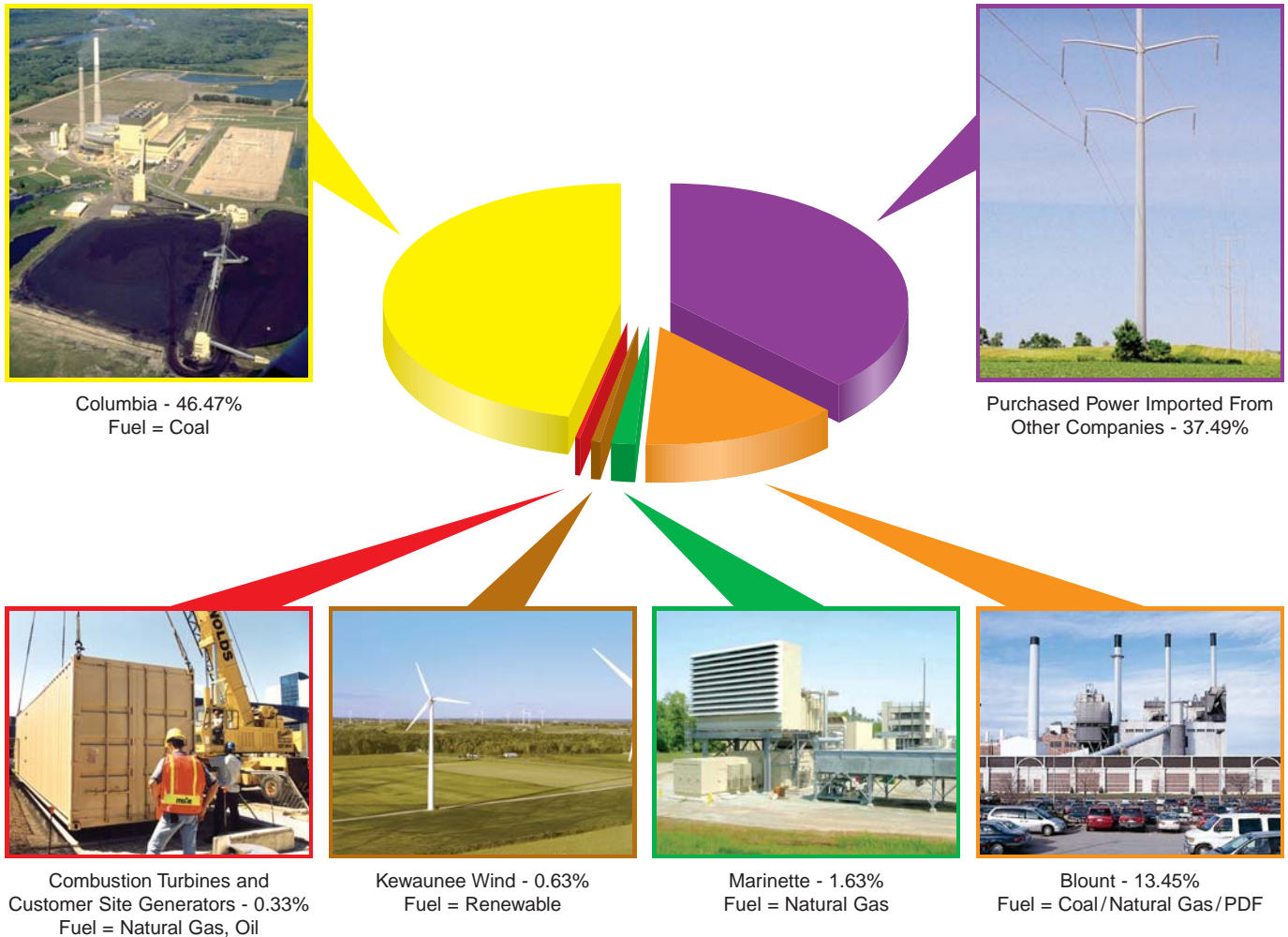
SECTION 1

ENVIRONMENTAL COOPERATIVE AGREEMENT (ECA) 2003 PERFORMANCE DATA

2003 MGE Power Sources

MGE's Blount Station continues to make an important contribution to the reliability of MGE's electric system. Blount's location in downtown Madison makes it especially significant for reliability in the central city area. During 2003, Blount provided 13.45% of the electricity for MGE customers.

Where MGE electricity comes from



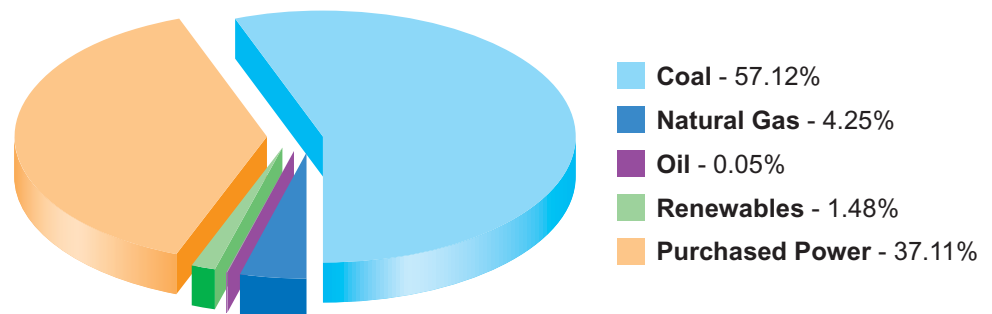
2003 MGE Electricity Fuel Sources

MGE went beyond our commitments in the ECA and further expanded our renewable fuels use.

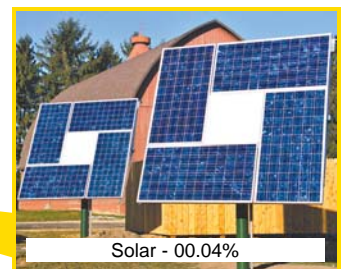
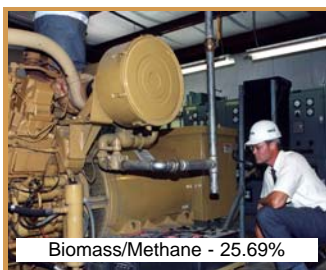
We worked with the City of Madison to plan a photovoltaic system to be installed on a canopy over nine parking stalls in the municipal building parking lot in downtown Madison. It will be one of our largest PV installations. Construction should be completed in spring 2004.

We teamed up with Wisconsin Public Power, Inc., to seek proposals for new wind generation. Cooperating with WPPI, we will be able to pursue a larger wind project which should help reduce the cost of wind power for MGE customers. We hope to offer more wind energy for our customers in 2005.

Fuels used to generate electricity

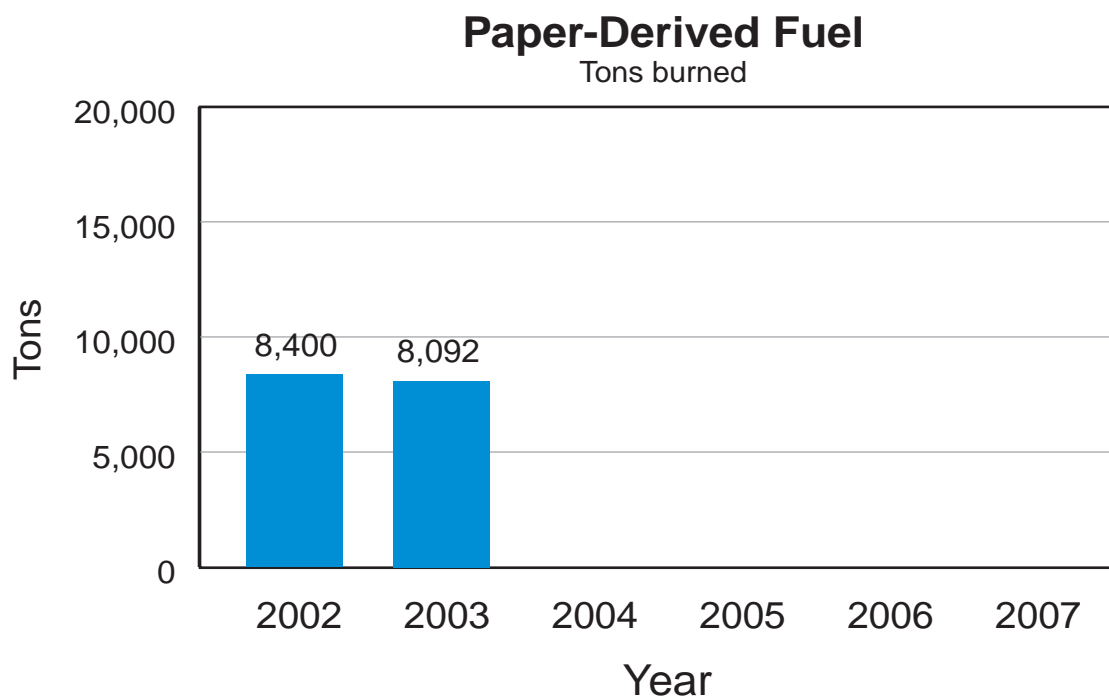


Renewables Mix



Alternate Fuel Usage

We investigated our options to increase use of pre-consumer paper, plastics, and cardboard waste materials (PDF) as fuel. We expanded our contract to provide increased volume of material and explored new waste sources that could meet our standards. We continued using PDF, but unfortunately one of our boilers was out of service for extended maintenance so our total consumption was down slightly from 2002. The boiler is back up and running.



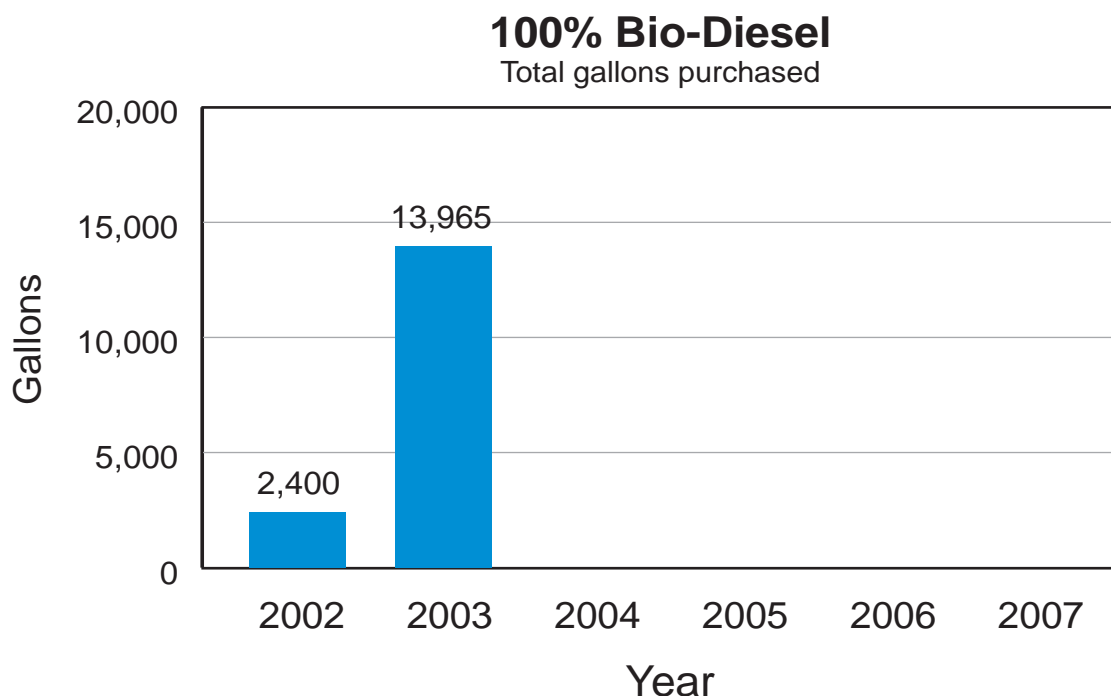
Tons of PDF Burned in 2003 8,092	=	Tons of Coal Displaced 10,758	=	Avoided Emissions (Reductions)* SO₂ - 306 Tons NO_x - 1 Tons Hg - 0.41 lbs. Ash - 4 Tons
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*Emission reductions are estimated as follows:

Emissions associated with the displaced coal (10,758 tons) minus the emissions associated with the PDF (8,092 tons) equals reductions.

Bio-Diesel Fuel

After the ECA signing in October 2002, MGE began using bio-diesel fuel in those fleet vehicles that refuel at the downtown Central Service Center. Bio-diesel is a fuel produced from a variety of renewable resources, including waste vegetable oils, cooking oil, soybean oil, and animal fats. Bio-diesel can replace petroleum diesel and reduces tailpipe emissions. It is renewable and biodegradable.

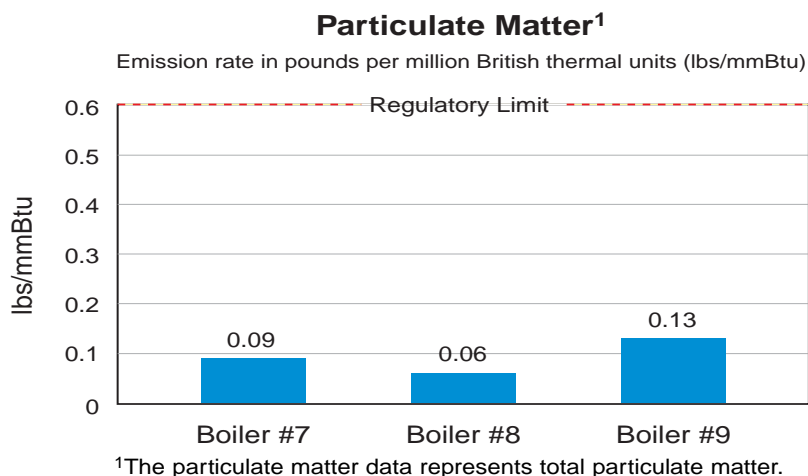


Based on Environmental Protection Agency (EPA) data, replacing petroleum-based diesel fuel reduces carbon monoxide emissions by 10%, particulate matter by 15%, sulfates by 20%, and hydrocarbons by 20%. (See EPA fact sheet in the Appendix for more details.)

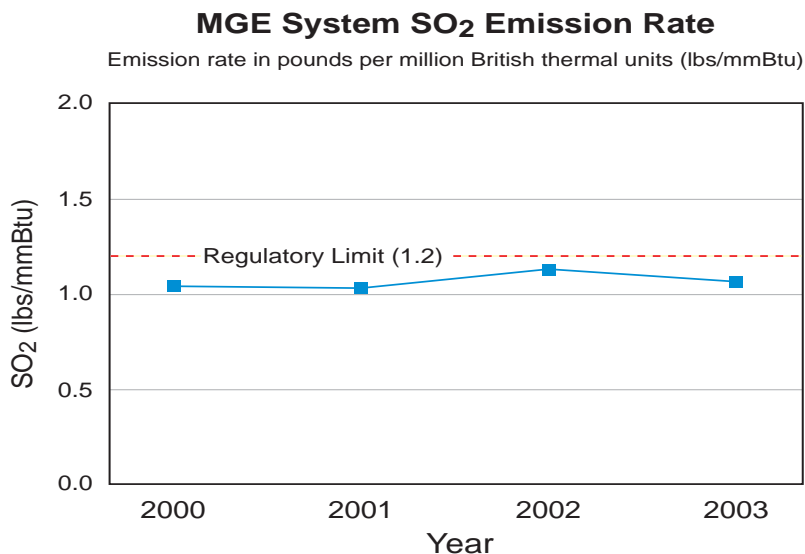
Regulated Emissions

MGE consistently achieves air emissions below regulatory requirements, and in several cases, well below. The following charts provide emissions data for 2003.

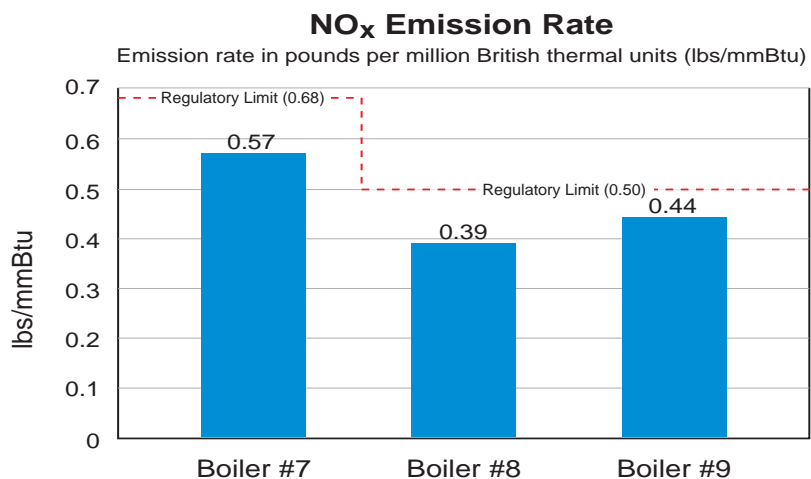
The air permit for Blount Station limits particulate matter emissions to 0.6 pounds per million British thermal units (Btu).^{*} The chart shows all three boilers are well below the regulatory standard ranging from approximately five to ten times lower than the limit.



The Wisconsin Acid Rain Law sets an annual average SO₂ emission rate of 1.2 pounds per million Btu for all MGE boilers. The emission rate is based on Continuous Emissions Monitoring System (CEMS) data collected at Blount Station and Columbia Generating Station. The CEMS consists of equipment and computers that track how much sulfur dioxide and nitrogen oxides the plants are releasing.



The EPA's Acid Rain Program for Blount Station limits NO_x emissions from each boiler. The EPA set different limits for different types of boilers. Boiler No. 7 has an annual NO_x limit of 0.68 pounds per million Btu. Boiler Nos. 8 and 9 have a NO_x limit of 0.50 pounds per million Btu. The NO_x emission rate is based on Continuous Emissions Monitoring System (CEMS) data collected at Blount Station.



^{*}A Btu is a measure of the heating value of the fuel being burned. Burning 91 pounds of coal generates one million Btu of heat.

No. 8 Boiler Combustion Improvement Study

We did the study and submitted the final version to the WDNR. We are continuing to work with the WDNR to develop an implementation plan. It appears that emissions improvement can be achieved.

The proposed project would include coal burner improvements, new PDF injectors, new PDF secondary air dampers, and improvements to the flame stabilizer. This project is intended to achieve the following goals:

1. Maintain visible emissions below 20 percent opacity at full load, firing 70 percent coal/30 percent PDF.
2. Enable PDF firing capacity to 30 percent.
3. Eliminate the need to co-fire natural gas at high boiler loads.
4. Limit loss on ignition to less than 10 percent at full load, firing 70 percent coal/30 percent PDF or 100 percent coal.
5. Limit NO_x emissions to less than 0.45 lbs/mmBtu on an annual average basis at full load, firing 70 percent coal/30 percent PDF or 100 percent coal.

MGE is committing to implement the project during the fall outage for Boiler No. 8 if it is determined the project is exempt from the state construction permitting requirements.

WDNR Voluntary Emissions Reductions Registry

We have calculated preliminary voluntary emissions reduction numbers and are reviewing them with the WDNR. They will be posted in the Registry once it is finalized. MGE anticipates registering emission reductions resulting from (1) PDF usage, (2) usage of compressed natural gas and bio-diesel for MGE fleet vehicles, and (3) usage of ultra low sulfur diesel fuel for MGE diesel generators.

Stormwater Demonstration Project

MGE has installed a storm filter system which utilizes state-of-the-art technology to filter and clean stormwater before it is discharged into nearby Lake Monona. (See fact sheet in Appendix.) This “Best Management Practice” exceeds existing regulations for stormwater discharge. Monitoring and measurement for this system is being implemented through collaborative efforts of Earth Tech, WDNR, U.S. Geological Survey, and the U.S. Forest Products Research Lab.

Noise Procedure

We developed a noise concerns procedure and included a draft in the March 2003 Baseline Report. The procedure has been implemented and is now being followed.

Mercury Thermostat Recycling for Building Contractors

We have been collecting old thermostats that contain mercury from customers for several years. We committed to expanding our program to building contractors. We advertised in *The Right Angle*, a publication of the Madison Area Builders Association, in three different issues throughout the year.

The ad notifies contractors who replace thermostats that they can drop off the mercury thermostats at MGE.

Sixty-one thermostats were recycled in 2003 versus 41 in 2002 which is a 49 percent increase.

Beneficial Ash Use Report

We explored several options to use the ash produced at Blount. The most promising was a vendor who was interested in using it as a raw material in his cement kiln. Unfortunately, that vendor was bought out and the new owner isn't interested in the small quantities we produce. We are now pursuing the potential for it to be used as structural fill in an underground mine. We will continue to explore other options as we discover them.

We also evaluated the potential for reburning ash from the UW Charter Street facility. Our current permit does not allow us to burn ash. We submitted a request in our air permit renewal application to the DNR to include ash in our fuel mix at Blount. We are trying to have the ash classified as coal rather than an alternative fuel. The ash has similar properties as coal. If ash is considered an alternative fuel, it will limit the amount of PDF we can burn.

Mercury Inventory and Removal Plan

We submitted our mercury inventory and removal plan to the WDNR as part of our ECA Baseline Report in March 2003. Since March, we have begun implementing this plan. Our initial mercury inventory was completed in October 2003. We will be disposing of roughly 10 to 20 pounds of mercury from our Blount Station in April 2004. This is in addition to the 1,000 pounds of mercury Blount removed prior to plan development. Our next steps for 2004 and early 2005 include creating a tracking database for mercury items, finalizing our initial list, and prioritizing our mercury equipment for disposal or control under our management plan, focusing on the removal of high-risk items and the tracking and control of low-risk items.

PCB Transformer Replacement Plan

We finished testing all our transformers on September 19, 2003. A total of 6,607 transformers were tested nearly six months ahead of schedule. MGE removed from service and disposed of the transformers with the highest PCB content (79 total). We are currently assessing our next steps for this plan, taking into consideration economic and environmental costs as well as potential federal regulations.

Research Plan - Diesel Generator Emission Reductions

MGE plans to evaluate the effectiveness of particulate filter traps on a single 600-kW diesel generator. The purpose of the program is to determine if we can reduce fine particulates even further than just by using the ultra low sulfur fuel. The actual particulate emission testing, including baseline testing and emission control testing, is anticipated to require at least 20 hours of generator operation over a several-day period. MGE is committing to conduct the testing in May 2005 once the WDNR authorizes a research and testing exemption and advance approval under NR 436.03. We are waiting until May 2005 to do the testing to allow more time for research since current technology does not

look promising for large-sized engines on diesel generators (at this time it appears best for small sized engines).

Pulsers Installation

MGE completed installation of a new pollution control device on December 18, 2003. As part of the ECA, MGE agreed to install a pulsed energization system (PES) that enhances the performance of the electrostatic precipitator on Boiler No. 8. The PES will directly reduce particulate matter and visible emissions from Boiler No. 8.

Beyond ECA

Blount Lighting Improvement

In an effort to reduce light pollution, Blount Station has been taking steps to improve outside lighting consistent with “Dark Skies” standards.

- **Coal Yard.** New fixtures were installed 18 feet high in the coal yard to eliminate the large high-wattage fixtures hanging over the roof over six stories high. The new fixtures are all below the height of the coal yard wall and direct all the light downward limiting light infiltration over the wall while maintaining the OSHA minimum lighting for a coal yard.
- **Rooftop.** New fixtures are being installed on the rooftop to replace incandescent lighting that is on continuously. The new fixtures are a new type of fixture with 84-watt compact fluorescent bulbs with fast-start cold weather ballasts. The new fixtures are much more energy efficient and are approved by the Dark Skies.
- **Electrostatic Precipitator Area.** New fixtures are being installed on the top of the electrostatic precipitators that will replace incandescent floodlights. The new fixtures will be switched and have the 84-watt compact fluorescent bulbs. They are still floodlights but will have cutoffs to eliminate the amount of light infiltrating over the edge.
- **Catwalks.** Part of the Dark Skies Initiative not only pays attention to the light itself but the structure it illuminates. For the catwalks that go from the plant roof to the fly-ash and bottom-ash silos, cutoff fixtures are being installed with compact fluorescent bulbs that will be on a motion/dusk-to-dawn sensor to only illuminate the catwalk when it is in use. This will replace incandescent bulbs currently on the catwalks.

The relighting project is in progress, the coal-yard lighting is complete, the precipitators are nearly complete, and the rooftop lighting is underway. The fixtures being used are a fairly new design with the compact fluorescent bulbs, cold-weather, rapid-start ballast. Most of the delay in completing the relighting project is due to the availability of the fixtures. The fixtures installed are working very well. They provide a safe working environment while reducing light pollution with increased energy efficiency.

New Photovoltaic System

In addition, MGE commenced construction in late November 2003 on a new downtown parking shelter that will be topped with photovoltaic (PV) panels. The 8.5-kW solar installation will produce clean energy that will be fed into the downtown electric distribution grid. It is expected to produce about 9,300 kWh per year.

The shelter is being constructed by MGE behind the Madison Municipal Building near Doty and Pinckney streets. The shelter is about 100-feet long, 18-feet wide, and covers nine parking stalls. On top of the shelter, 66 metal PV roof panels in a deep blue color will collect solar energy.

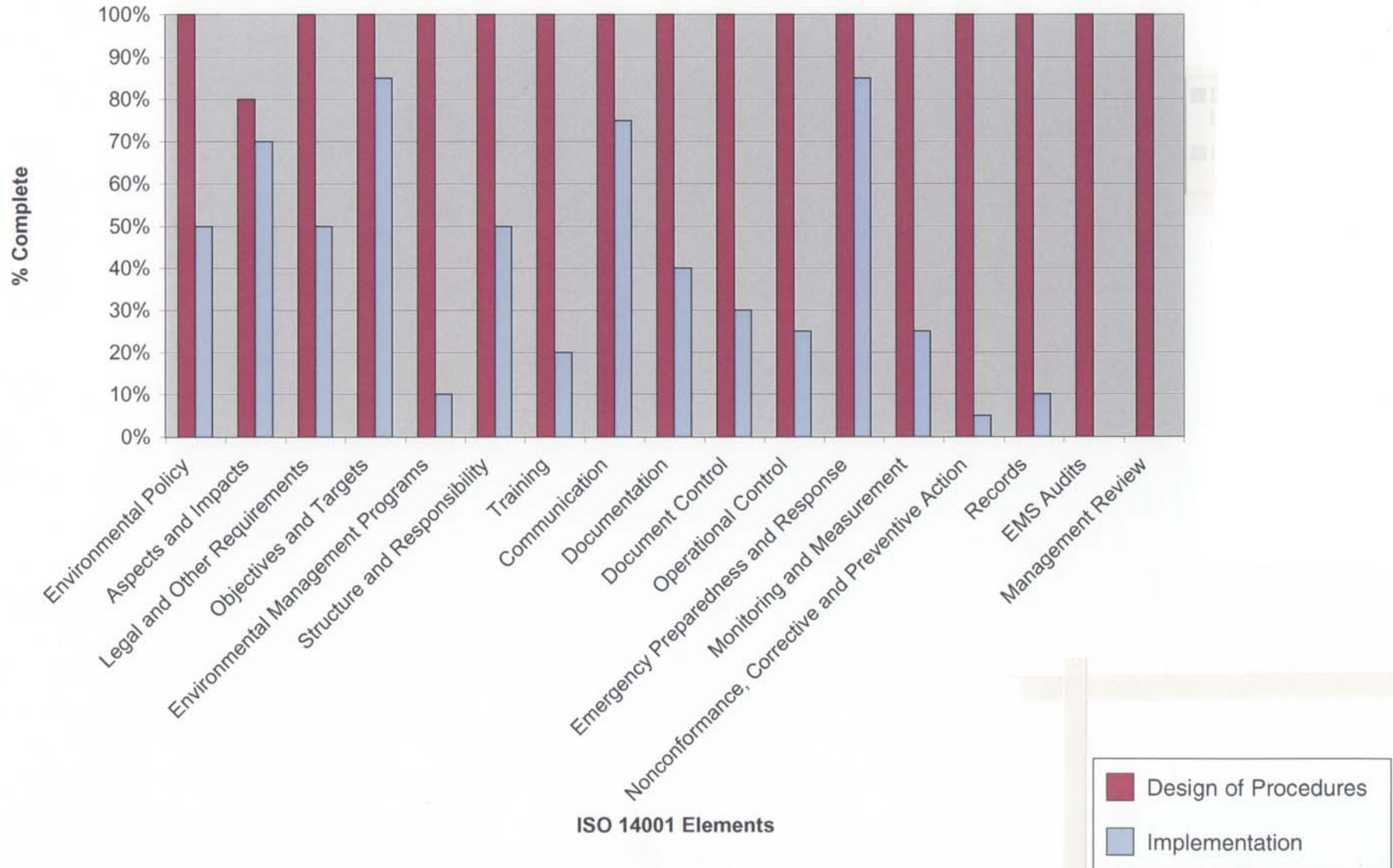
Once construction is complete this spring, the area will be landscaped with small trees and shrubs. The structure's rain gutter will direct water to the landscaping.

Environmental Management System

MGE has made significant headway towards designing and implementing its ISO 14001-based Environmental Management System (EMS) at Blount Station. MGE recently hired First Environment to evaluate our EMS based on each of ISO's 17 elements/components. The graph that follows on the next page was provided by First Environment and represents their assessment of our design and implementation. The ISO elements are listed along the bottom of the graph. Percent completed of the program design and implementation is listed on the vertical axis. First Environment has concluded that nearly the entire program has been written, a good portion has been implemented, and MGE is on track to meet its September 2004 deadline as specified in the ECA.

Environmental Management System

Blount EMS ISO 14001 Element By Element Review



SECTION 2

COMPLIANCE AUDIT RESULTS AND CORRECTIVE ACTION

SECTION 2

COMPLIANCE AUDIT RESULTS AND CORRECTIVE ACTION

Introduction

As part of the Environmental Cooperative Agreement (ECA) process, an independent auditing firm, Van Breusegen & Associates, Inc. (VBA), evaluated Blount Station (Blount) to determine its performance with federal, state, and local environmental requirements as well as the ECA. The audit was performed by three (3) environmental professionals between December 15 and 19, 2003. The audit involved a physical survey of operations, an extensive examination of relevant records, and interviews of key MGE personnel. VBA has extensive experience in performing environmental audits on industrial operations throughout North America, including performing the 2002 Blount audit. VBA's statement of qualifications (SOQ) is included in the Appendix.

VBA's audit results are included in the first part of this section. After assessing all applicable regulations, VBA did find some conformance exceptions at Blount. As VBA states in the Executive Summary of the audit, most of MGE's conformance exceptions involved record keeping and reporting. For example, some exceptions involved MGE's inability to obtain or locate written approval from WDNR to utilize alternate reporting methods. In most of these instances, MGE had received WDNR approval via e-mail or telephone rather than on Department letterhead. Although we do believe MGE received the necessary approvals in an appropriate fashion, the exceptions are noted in the report, and we plan to address them with WDNR. Based on VBA's experience, VBA concluded that MGE personnel demonstrated a thorough understanding of environmental regulations and considered environmental compliance to be a priority (please see the audit for VBA's full text).

We can further report that MGE is in conformance with the ECA in all but two instances. Furthermore, our efforts in training and communicating to our employees the importance of managing our environmental impacts is reflected in the fact that VBA found no emission limit exceedances. None of the audit findings involve an impact on public health, safety, or the environment.

The VBA audit identified areas for improvement. We recognize that the appropriate response to these discoveries requires both swift action to immediately correct any problems and long-term solutions that prevent future nonconformance. The immediate corrective action taken on each finding is explained in the Corrective Action table located in the second half of this section.

Environmental Audit Report

**Prepared by
Van Breusegen & Associates, Inc.
St. Albans, Missouri**

**Environmental Audit Report
Madison Gas and Electric
Blount Generating Station
Madison, Wisconsin**

December 2003

*Prepared for
Madison Gas & Electric
Madison, Wisconsin*

*Prepared by
Van Breusegen & Associates, Inc.
St. Albans, Missouri*

VBA Project No. 1800

MGE Blount Generating Station – Madison, WI
Environmental Audit Report – December 2003

Introduction

This report summarizes the results of an environmental audit of the Madison Gas & Electric (MGE), Blount Generating Station (“Facility”) located in Madison (Dane County), Wisconsin. The objective of this audit was to evaluate the conformance status of representative Facility operations with respect to Federal, State of Wisconsin, Dane County and City of Madison statutes, regulations, ordinances and the WDNR/MGE Environmental Cooperative Agreement (ECA). The objective of the attached report is to communicate the audit results. This report is not meant to imply legal certification of compliance or non-compliance.

The scope of this audit was generally directed toward Facility operations related to air quality (asbestos, CFCs, construction/operating permits, NSPS, NESHAPs, PSD), emergency planning (EPCRA/CERCLA reporting, SPCC/OPA/FRP, Hazardous Waste Contingency Plans, RMP), regulated materials (PCBs, pesticides, radiation, TSCA/non-PCBs), USTs/ASTs, waste management (hazardous, medical, solid, universal, used oil), and water quality (groundwater, NPDES/SPDES, SDWA, storm water, UIC, wastewater, wells). The period of review was from January 2003 to December 2003. The audit site visit was conducted on December 15-19, 2003. Additional information provided by the Facility as of January 9, 2004 is also reflected in the audit report as appropriate. The audit was based on a physical survey of the facility and examination of a sample of environmental, administrative and/or operating records, and interviews with key personnel.

This report includes all non-conformance findings identified during the audit, regardless of significance of the issue. Findings are categorized as “exceptions”, which are confirmed instances of non-conformance, or “observations”, which are instances where non-conformance is suspected but unconfirmed, or where there is an elevated risk of non-conformance if action is not taken. All findings in this report are exceptions, unless specifically identified as an observation.

[See glossary of acronyms in the Appendix.]¹

¹ This has been added by MGE to provide clarity to the reader.

MGE Blount Generating Station – Madison, WI
Environmental Audit Report – December 2003

Executive Summary

Facility operations reviewed were noted to be in substantive conformance with Federal, State of Wisconsin, Dane County and City of Madison statutes or regulations, except as provided in the findings tables of this report. The findings are summarized as follows:

Program Area	Exceptions	Observations
Air Quality	11	6
Emergency Planning	5	0
Regulated Materials	1	1
USTs/ASTs	0	0
Waste Management	5	0
Water Quality	3	4
Total	25	11

Additionally, the facility was in substantive conformance with conditions of the Environmental Cooperative Agreement (ECA), except for the two issues noted in the findings tables of this report.

Based upon VBA's experience, MGE personnel have a thorough working knowledge of applicable regulatory requirements and consider environmental compliance to be a priority. MGE personnel demonstrated a thorough understanding of the applicable environmental regulatory programs. In addition, records management was significantly improved from the 2002 Audit. Records were, for the most part, readily available for review.

The following tables present the full text of the environmental non-conformance findings that were identified during the audit. Included are the regulatory citations for those findings driven by regulatory requirements. The non-conformance issues are principally associated with recordkeeping and reporting issues.

MGE Blount Generating Station – Madison, WI
Environmental Audit Report – December 2003

Topic	Conformance Exceptions	Recommendation
Air – Acid Rain	The facility did not submit the Phase II Annual Compliance Certification for 2002 to the WDNR, as required by condition 4.a.(1) of the Acid Rain portion of the Operating Permit.	The facility should submit a copy of the Phase II Annual Compliance Certification to the WDNR.
Air - NESHAP	<p>The facility did not consistently include the volume of asbestos disposed in “cubic yards” as specified by Asbestos Waste Shipment Record instructions and NR 447.13(2)4.(a) (i.e., Shipment Records Nos. 740435 – 10/17/03; 740434 – 10/9/03; 740432 – 8/14/03; 740431 – 8/12/03; 740731 – 7/17/03; 740542 – 7/8/03).</p> <p>Note: Facility personnel stated that, with the exception of the 10/09/03 shipment, all shipments were less than one cubic yard in volume.</p>	The facility should ensure that volume shipped is indicated in cubic yards on all future asbestos manifests.
Air – Operating Permit	<p>Test plans and testing notifications submitted in 2003 for proposed particulate matter testing of boilers 7, 8 and 9 were deficient as follows:</p> <ul style="list-style-type: none"> • Test plan submitted in April 2003 did not include the test dates, a description of process and operational variables that may affect the source’s emissions, a sketch showing the sampling point location relative to the nearest upstream and downstream flow disturbances, and an indication of the production rate and operation conditions under which the tests will be conducted, as required by NR 439.07(2); • Test plan submitted in September 2003 did not include a sketch showing the sampling point location relative to the nearest upstream and downstream flow disturbances, and an indication of the production rate and operating conditions under which the tests will be conducted, as required by NR 439.07(2); 	MGE should ensure that all future test plans contain the required information, and that all correspondence regarding scheduling of stack tests is certified by the Responsible Official.

MGE Blount Generating Station – Madison, WI
Environmental Audit Report – December 2003

Topic	Conformance Exceptions	Recommendation
	<ul style="list-style-type: none"> January 2003 notice of test dates was not certified by the Responsible Official, as required by Part II.D.5 of the Operating Permit; and February and December 2003 notices of test postponement were not certified by the Responsible Official, as required by Part II.D.5 of the Operating Permit. 	
Air – Operating Permit and ECA	<p>The following deficiencies were noted regarding calculation of HAP emission values and operating hours:</p> <ul style="list-style-type: none"> The rolling 12-month operating hour values for P31 and P33 were not calculated for January-September 2003, as required by conditions I.J.3.b.(1) and I.K.3.b.(1) of the Operating Permit; and The rolling 6-month values for HAP emissions from paper-derived fuel (PDF) firing were not calculated during 2003, as required by condition XI.A.5.a of the Environmental Cooperative Agreement. 	<p>The facility completed the following corrective actions during the audit period:</p> <ul style="list-style-type: none"> The facility began calculating the rolling 12-month operating hour values for P31 and P33 on a monthly basis in October 2003. <p>The facility should commence calculation of the rolling 6-month HAP emission values on a monthly basis.</p>
Air – Operating Permit	<p>The following deficiencies were noted regarding the PDF baghouse:</p> <ul style="list-style-type: none"> The facility recorded pressure drop values for the PDF baghouse that were outside of the permitted range of 2-7 inches of water, established by condition I.M.1.b.(2) of the Operating Permit, on January 3, 6-10 and 13-16; February 17, 18, 24 and 25; March 17; and October 13 and 15, 2003; and Notification of the pressure drop exceedances was not made by the next business day, along with the cause and corrective actions taken, as required by NR 439.03(4)(c). 	<p>The facility should implement the following corrective actions:</p> <ul style="list-style-type: none"> Ensure the pressure drop is maintained within the established range of 2-7 inches of water; and Report the exceedances, cause and corrective actions taken to the DNR.

MGE Blount Generating Station – Madison, WI
Environmental Audit Report – December 2003

Topic	Conformance Exceptions	Recommendation
Air – Operating Permit	The facility currently determines the percent of heat input contributed by the PDF in boilers B28 and B29 using CEM data, rather than the heat input/steam charts required by Condition I.G.1.b.(2)(e) of the Operating Permit. MGE personnel stated that verbal approval was obtained from WDNR to utilize the alternate method.	The facility should either begin utilizing the heat input/steam charts to determine percent heat input from the PDF or obtain written approval for this alternate method of determining compliance with the PDF percent heat input limits from the WDNR.
Air – Operating Permit	PDF composite samples are currently analyzed for heat content using ASTM D1989. Condition I.G.2.c.(4)(d) requires the use of ASTM D2015-85 for heat content determination of PDF samples. Written approval for the alternate method has not been received.	The facility should either begin using the required method for analysis of heat content, or obtain written approval for the use of an alternate method from the WDNR.
Air – Operating Permit	The semi-annual monitoring report for 2003 summarizes exceedances based on the CEMS, but does not include either monitoring results or a summary of monitoring results for all monitoring, as required Conditions I.AB.1.a(1) and II.D.4 of the Operating Permit.	The facility should resubmit the report, including the proper information, or obtain written approval from WDNR for an alternate format. Note: The facility has an e-mail from a staff engineer at DNR stating the reports look fine. The facility should seek legal advice to determine if the e-mail is sufficient for approval of an alternate reporting format.
Air – Operating Permit	The facility submitted the Excess Emission Reports (EERs) for 2003 using the summary EER format, rather than the full EER format, required by Condition I.AB.2.a of the Operating Permit, and by NR 439.09(10). The summary EER format may only be used if written approval is received from the WDNR.	MGE notified WDNR of this compliance issue in the 2002 Annual Compliance Certification, and stated that it would be seeking approval of the use of the summary EER format. However, a written request for such approval has not yet been submitted.
Air – QA/QC Manual	The calibration filters used to conduct the quarterly COMS audits for 2003 did not meet the range values established in the QA/QC Manual, when corrected for stack conditions. Specifically, the mid and high range values were not met for 1 st , 2 nd and 3 rd quarters of 2003.	The facility should begin using calibration filters for the quarterly COMS audits that are within the established ranges, or modify the ranges established in the QA/QC Manual to reflect the values of the current filters.

MGE Blount Generating Station – Madison, WI
Environmental Audit Report – December 2003

Topic	Conformance Exceptions	Recommendation
Air – ECA	The ECA requires all correspondence be directed between the liaisons established in the agreement. Correspondence regarding the estimation of HAP emissions was not directed to the DNR liaison, and was not signed by the MGE liaison.	The facility should ensure all future correspondence is signed by the liaison for MGE and directed to the liaison for the DNR.
Emergency Planning – EPCRA/ CERCLA	<p>The following deficiencies were noted regarding initial notification (311 notification) and annual (Tier II Report) reporting for calendar year 2002 hazardous substances reporting (Tier II Report) as required by 40 CFR 370.25(a):</p> <ul style="list-style-type: none"> • The Tier II Report did not include all storage codes and locations for reported chemicals (i.e., C,1,4, for storage of coal in 800 ton day bins within the building; D,1,4, for storage of sodium hydroxide and sulfuric acid in drums at the wastewater treatment building; C,1,4, for the 660-gallon tank located in the General Office Facility (GOF) generator room); and • The Tier II Report did include inventory codes for No. 1 Fuel Oil. 	The facility should ensure the calendar year 2003 Tier II report includes all storage codes and locations for chemicals reported.
Emergency Planning – EPCRA/ CERCLA	<p>The following deficiencies and/or discrepancies were identified regarding Toxic Release Reporting (TRI Form Rs) required by 40 CFR 372.30:</p> <ul style="list-style-type: none"> • The Form Rs submitted for Lead and Mercury did not include information for transfers of these materials to off-site recycling companies; and • The facility did not conduct and/or document a threshold determination for processing trimethylbenzene (contained in the No. 1 Fuel Oil) during calendar year 2002 as required by 40 CFR 372.10(a)(3)(ii). 	<p>The facility should conduct the following corrective actions:</p> <ul style="list-style-type: none"> • File amended Form R's for Mercury and Lead to include off-site transfers to recycling facilities; and • Verify the volume of No. 1 Fuel Oil loaded into the tank in calendar year 2002 and document a threshold determination for trimethylbenzene.

Topic	Conformance Exceptions	Recommendation
Emergency Planning – SPCC/OPA/FRP	<p>The SPCC Plan for the Blount Generating Station does not include all oil storage areas with potential for discharge by “spilling, leaking, pumping, pouring, emitting, emptying or dumping” as required by 40 CFR 112.7. Oil storage and/or use areas observed at the time of the site visit but missing from the Plan include the following:</p> <ul style="list-style-type: none"> • Oil-filled hydraulic shearing and compacting equipment located in the PDF building; • A fuel storage tank in the screen house basement that is no longer used and should be included in the plan or “permanently closed” as specified in the rule; • One 55-gallon drum of waste transformer oil in Demin/RO area; and • Hydraulic reservoir for elevator located near the supply room. 	<p>The facility should revise the Blount Generating Station SPCC Plan to include all oil storage areas.</p>
Emergency Planning – SPCC/OPA/FRP	<p>The following deficiencies were noted regarding secondary containment or diversionary structures at the Blount Generating Station (40 CFR 112.7(c)):</p> <ul style="list-style-type: none"> • The following do not have secondary containment or diversionary structures and the plan does not describe why such measures are not practicable, nor does the plan provide for contingency planning and a written commitment of manpower and resources for response in lieu of secondary containment (40 CFR 112.7(d)): <ul style="list-style-type: none"> ○ New and used oil storage tanks located at 6-T-0 (no diking, berms or engineered diversionary structures); ○ Oil filled equipment throughout the plant; and ○ The emergency generator crank case/filter tank and drummed oil located in the Gas Pressure House are not secondarily contained and a floor drain located in the vicinity discharges to the lake via the city’s storm sewer; • The floor of the containment area for the 500,000 gallon fuel 	<p>Secondary containment should be provided for each oil storage area (including oil-filled equipment) or the SPCC Plan should address the lack of containment and provide protection through contingency planning, integrity testing, etc.</p> <p>The SPCC Plan should include documentation of the size and adequacy for each secondary containment structure.</p> <p>The SPCC Plan should be revised to include information on the permeability of the gravel/earthen material used for secondary containment and its adequacy.</p>

Topic	Conformance Exceptions	Recommendation
	<p>oil tank is comprised of gravel/earthen material. The SPCC Plan does not address the permeability of the gravel/earthen material; and</p> <ul style="list-style-type: none"> • The SPCC Plan does not discuss containment volume for those storage and transfer areas located within secondary containment. 	
Emergency Planning – SPCC/OPA/FRP	<p>The Blount Generating Station SPCC Plan dated July 2003 has the following discrepancies and/or deficiencies:</p> <ul style="list-style-type: none"> • Several sections of the plan do not follow the sequence outlined in 40 CFR 112.7, nor does the plan contain a cross-reference table (Sections 3.6 and 3.7 are out of order for example); • The plan does not address the spill potential, the predicted rate of flow or quantity discharged from the facility as the result of each type of major equipment failure; most notably missing is the 500,000 gallon fuel oil storage tank (40 CFR 112.7(b)); • The plan's diagram(s) do not show the location and contents of each container (40 CFR 112.7(a)(3)); • The plan does not adequately address integrity testing of all bulk storage containers (tanks, drums, etc.) or explain why integrity testing will not be done and what measures will be used in lieu of testing – only the large storage tank is discussed in the plan (40 CFR 112.8(c)(6)); • The plan does not address engineered controls for the prevention of overfill for all tank installations (i.e., storage tanks located in the basement that are filled remotely from the main floor) (40 CFR 112.8(c)(8)); and • The plan does not adequately discuss the details of installation and operational start-up for additional equipment, procedures, methods and facilities necessary to meet the 	<p>The facility should revise the SPCC Plan to address the listed deficiencies and implement the plan as written.</p>

Topic	Conformance Exceptions	Recommendation
	<p>requirements. There are several sections of the plan that reference future installations but no specifics are included regarding installation dates, start-ups or what equipment these controls will be associated with specifically. (40 CFR 112.7)</p> <p>Plan implementation deficiencies:</p> <ul style="list-style-type: none"> • The plan states that loading/unloading instructions and vehicle departure information is posted at loading/unloading stations, while no postings were observed at the time of the site visit and reportedly were removed; • The facility has not conducted quarterly inspections as specified in the plan; • The facility has not conducted employee training on the plan as specified in the plan; and • The plan states there are signs warning vehicles of overhead piping but no overhead piping was observed at the facility. <p>Note: Prior to July 2003, the facility did not have a certified, implemented SPCC.</p>	
Regulated Materials – PCBs	<p>The following deficiencies were noted regarding the on-site storage of one partially full 5-gallon container of oil containing 55,400 ppm PCBs:</p> <ul style="list-style-type: none"> • The container was not labeled in accordance with 40 CFR 761.40(a); • The PCB Liquid was not disposed within 1-year of generation as required by 40 CFR 765(a)(1); and • The container was not moved to a designated PCB storage unit within 30-days of generation as required by 40 CFR 765(c)(1). 	<p>The facility arranged for collection, transportation and disposal of the container during the audit site visit.</p> <p>No further action is recommended.</p>

MGE Blount Generating Station – Madison, WI
Environmental Audit Report – December 2003

Topic	Conformance Exceptions	Recommendation
Waste – Hazardous	<p>The facility's hazardous 2002 Hazardous Waste Report Certification was not signed by an Authorized Representative of the facility as required by NR 610.08(g)5. and NR 600.03.</p> <p>Note: The report was signed by the Senior Environmental Specialist.</p>	<p>The facility should conduct the following corrective actions:</p> <ul style="list-style-type: none"> • Ensure all future reports are signed by an Authorized Representative; and • Seek legal advice to determine if the previous report should be resubmitted with proper signatory authority.
Waste – Hazardous	<p>The facility did not submit a copy of its RCRA Contingency Plan (emergency management plan) to the "local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services" and "the WDNR" when acting as a large quantity generator of hazardous waste during September 2003 as required by NR 630.22(b).</p>	<p>The facility should ensure that the RCRA Contingency Plan is submitted to the appropriate agencies when LQG status is reached.</p>
Waste – Hazardous	<p>The facility operated as a small quantity generator of hazardous waste during 11 of 12 months of review. The following deficiencies/ discrepancies were noted regarding the facility's hazardous waste management program as required for SQGs by NR 610.05, NR 610.08 (1)(w) and (2)(a);</p> <ul style="list-style-type: none"> • The facility had not provided hazardous waste training to personnel in the information management systems group, whom are responsible for recycling/disposal of cathode ray tubes; • The facility had not characterized waste gaskets generated by application of Loctite 790 Cleaner containing 50-75% methylene chloride (a F002-listed waste) as required by NR 610.05; • Shop towels utilized to absorb spent trichloroethylene solvent (C-60 Solvent Cleaner/Degreaser hazardous waste code F001) from degreased metal parts in the maintenance shop and electrical shop were not managed as a hazardous waste (labeling and inspections) prior to off-site laundering; 	<p>The facility should conduct the following corrective actions:</p> <ul style="list-style-type: none"> • Include appropriate information management personnel in hazardous waste awareness training; • Characterize waste gaskets generated by application of methylene chloride spray solvent; • Manage shop towels utilized to absorb C-60 spray solvent as hazardous waste during on-site accumulation prior to recycling (i.e., laundering); • Provide additional training to personnel responsible for weekly inspections; and • Modify the weekly inspection form to include the "time" of the inspection.

Topic	Conformance Exceptions	Recommendation
	<ul style="list-style-type: none"> Weekly inspections of the satellite accumulation area located in the instrument shop were not consistently documented on the Hazardous Waste Inspection Log (i.e., weeks of 1/1/03 thru 4/16/03; 5/5/03 thru 5/19/03; 6/2/03; 7/21/03; 8/4/03 thru 8/18/03; 9/8/03; 9/22/03; 10/06/03; 10/20/03 thru 11/10/03; 11/24/03; and 12/8/03); A cursory review showed weekly inspections of the satellite accumulation area located in maintenance shop were not consistently documented on the Hazardous Waste Inspection Log; and Inspection forms utilized did not include the “time” of the inspection as required by NR 610.08(o). 	
Waste – Hazardous/ Universal	<p>The following deficiencies / discrepancies were noted regarding on-site waste management of spent Lithium and Ni-Cd batteries, spent mercury thermostats and spent mercury-containing spent lamps:</p> <ul style="list-style-type: none"> A spent fluorescent lamp leaning against south basement wall beneath the No. 9 boiler, a broken incandescent lamp observed in a trash can adjacent to the No. 7 boiler; a broken fluorescent lamp located in the “Chemical Room”; and three “burnt-out” halide bulbs located on the floor near the “Chemical Room” were not managed as universal waste in accordance with 40 CFR 273; and A box of spent fluorescent lamps (approximately 10 bulbs) located between the coal yard supervisors’ office and Turbine No. 3 were not managed in closed containers in accordance with 40 CFR 273.13 (d), were not marked with the accumulation start date in accordance with 40 CFR 273.15(c), and were not labeled with the specific universal waste labeling requirement as required by 40 CFR 273.14 (e). 	<p>The facility should conduct the following corrective actions:</p> <ul style="list-style-type: none"> Manage spent lamps in closed containers labeled with the words "Universal Waste—Lamp(s)," or "Waste Lamp(s)," or "Used Lamp(s)"; Mark each container with an accumulation start date and manage the used lamps within one year; and Provide additional awareness training to personnel responsible for proper management of spent lamps, including relabeling accumulation start dates as appropriate.
Waste –	Containers holding used oil were not consistently labeled with the words “used oil” as required by NR 590.13(4) as provided by the	The facility should ensure that containers are consistently

MGE Blount Generating Station – Madison, WI
Environmental Audit Report – December 2003

Topic	Conformance Exceptions	Recommendation
Used Oil	<p>following examples:</p> <ul style="list-style-type: none"> • One 5-gallon container of used oil from the air handling system blow-down in the fly-ash loading arm room was not labeled; • One 55-gallon drum of used oil near the No. 6 Turbine was labeled waste oil as opposed to “used oil” as required by NR 590.13 (4); and • One 55-gallon drum of used oil located in the RO/Demineralization room was labeled “lube oil” as opposed to “used oil”. 	labeled with the words “used oil.”
Water – POTW	<p>The facility’s MMSD permits IP-8 (Part 2, Section 2.(c)ii.) and NTO-85C (Part 2, Section 2) require that all reports shall be signed and sworn by a responsible corporate officer. The facility does not include a certification statement with its semi-annual monitoring reports required under both MMSD permits. Additionally, for permit IP-8; the semi-annual compliance report does not include a summary of the self-monitoring results obtained during the period and the flow data for the compliance sampling day (Part 2, Section 2, (b)i. and ii.)</p>	<p>The facility should immediately begin including a certification statement (language is specified in Permit No. IP-8 Part 2, Section 2.(c)ii.) with each report submitted to the agency. Also, compliance sampling day flow information should be included in the semi-annual reporting.</p>
Water – WPDES	<p>The facility periodically discharged emergency generator cooling water through an unpermitted outfall until May 2003. The facility believed this waste stream was being discharged through outfall 003, which is permitted under WPDES permit WI-0001961 to discharge this waste stream (and others). The facility recently discovered that the cooling water is discharged through a different outfall (009), which is connected to the City of Madison’s storm sewer system.</p>	<p>The facility has notified DNR of the mistake and has obtained coverage for this discharge under the state’s General Permit for Cooling Water Discharges. No further action recommended.</p>

Table of Findings - Observations

Topic	Conformance Observations	Recommendation
Air – Operating Permit	Documentation (i.e., dated materials) was not sufficient to demonstrate that the rolling 12-month operating hour values for boilers B21, B22 and B23 were calculated within 15 working days of the end of each month for January-September 2003, as required by condition I.A.4.b.(1) of the Operating Permit. Note: MGE personnel stated that calculations were conducted within 15 days, although documentation of the calculation date was not recorded.	Monthly calculations for B21, B22 and B23 were dated beginning October 2003. No further action is recommended.
Air – Operating Permit	The facility currently records the pressure drop once per operating day, despite operating the PDF system for longer than 8 hours per day. Condition I.M.1.c.(2) of the Operating Permit requires recording of the pressure drop at least once every 8 hours of operation. It is not clear that recording once per operating day is consistent with the once per 8-hour requirement.	The facility should begin recording the pressure drop once every 8-hours of operation of the PDF system or obtain written clarification from WDNR and/or legal guidance to determine if the once per day recordings are consistent with permit conditions.
Air – General	The facility documents required coal yard inspections and activities on several forms on a daily basis. The large volume of forms was not maintained in an organized manner, and so a thorough review to determine if all required inspections were conducted during 2003 was not practical.	The facility should maintain the coal yard inspection forms in an orderly fashion so that they are readily available for inspection by a state or federal inspector.
Air – Operating Permit	Filters A3131, TW04 and TW05 were used to calibrate #7 and #8 COMS on September 11, 2003. The certification of these filters expired September 4, 2003. The filters were recertified October 21, 2003 and found to be acceptable for continued use.	The facility should ensure that filters are recertified annually prior to the expiration date.
Air – Operating Permit	The Annual Compliance Certification for 2002 does not identify each permit condition; the compliance status of the facility in relation to each condition; whether compliance was continuous or	The facility should seek legal advice to determine if the short form reporting is sufficient to meet both permit and federally enforceable requirements.

Table of Findings - Observations

Topic	Conformance Observations	Recommendation
	<p>intermittent; and the method of determining the compliance status, as required by condition II.N of the Operating Permit. Compliance Certifications for previous years were submitted in the correct format.</p> <p>Note: The facility received an e-mail from the WDNR on January 17, 2003 stating that the “short form” reporting was acceptable.</p>	
Air – Operating Permit	<p>Documentation was not sufficient to demonstrate that all instruments used to measure operational variables for air pollution control equipment are calibrated at least once per year (e.g., pressure drop monitors on baghouses), as required by Condition II.C.13 of the Operating Permit.</p> <p>Note: Condition II.C.13 of the Operating Permit does not explicitly state that records of calibrations must be maintained.</p>	<p>The facility should ensure that all such instruments are calibrated at least every year, and that the calibrations are documented in order to demonstrate compliance with this provision.</p>
Regulated Materials	<p>Two self-luminous (tritium) exit signs located in the PDF building were not labeled with disposal instructions. These signs can only be disposed through return to the manufacturer.</p> <p>Additionally, the facility does not have the original transfer receipts for the self-luminous exit signs to document that the contents of the products contain either tritium, krypton-85, or promethium-147 and are exempt from the licensing requirements of 10 CFR 30.3.</p>	<p>The facility should conduct the following corrective actions:</p> <ul style="list-style-type: none"> • Obtain a copy of the transfer receipts for facility files; and • Place instructions on the signs to contact the environmental department prior to removal or disposal.
Water – Categorical Discharge	<p>Categorical requirements for direct dischargers specify compliance with individual waste stream limits even in the case of a combined stream discharge (NR 290.12(1)(e) and 40 CFR 423.12(11)&(12)). Total suspended solids (TSS) and oil and grease (O&G) are limited for low volume wastes but not for once-through cooling water, a significantly larger volume discharge.</p>	<p>The facility should consider documenting (through laboratory analysis or process knowledge) that low volume discharge streams are in compliance with the limits specified for those discharges.</p>

Table of Findings - Observations

Topic	Conformance Observations	Recommendation
	The facility is not able to show that low volume discharge streams are in compliance with the specified concentration limits without the benefit of dilution with the high volume, once-through cooling water discharge.	
Water – POTW	The facility semi-annually samples a groundwater seepage stream for total cyanide as required in MMSD Permit NTO-85C. The local limit for total cyanide is 0.1 mg/l. Both semi-annual analyses for 2003 were above the local limit (0.22 mg/l and 0.17 mg/l), however, the samples were taken at the groundwater seepage collection point (as specified in the permit) and do not indicate what the actual cyanide levels would be at the facility's discharge point (007). The facility notifies MMSD when the cyanide number is above the limit. MMSD typically states that it is acceptable based on the amenable cyanide number (no local limit for amenable cyanide). The permit's general conditions require repeat sampling within 30 days in the event of a violation. It is unlikely that this discharge would cause a violation at the facility's 007 discharge to MMSD (permitted under IP-8), however the facility has no documentation to that affect.	The facility should consider sampling 007 simultaneously for cyanide to ensure there is documentation verifying that a violation has not occurred or request that the permit language be clarified regarding the compliance point for cyanide.
Water – SDWA	Two drinking water fountains at the Blount Generating Station were observed to have point-of-use treatment devices, potentially qualifying the facility as a Public Water Supplier (i.e., providing treated water to more than 25 persons). Based upon phone discussions with the WDNR, point-of-use treatment devices are only regulated by the WDNR when utilized to remove "contaminants" from water and not when utilized for "aesthetic purposes" in conjunction with water supplied by an approved Public Water System. It is the auditors' understanding that the point-of-use filters are for aesthetic purposes.	The facility should document in appropriate files that all point-of-use devices at the Blount Generating Stations are utilized for aesthetic purposes.

Table of Findings - Observations

Topic	Conformance Observations	Recommendation
Water – WPDES	The facility has a groundwater seepage stream (< 2 gallons per minute) that is a permitted discharge to the MMSD. However, the facility is designed to divert sump flows, (including this groundwater seepage stream), to the wet well in the coal yard, which ultimately discharges to Lake Monona under WPDES permit WI-0001961. The diversion will only happen if the Blount Generating Facility loses power and the basement flood pump starts up. The facility has not had a diversion of this type to date, but this pollutant stream was not identified in the WPDES permit application or subsequent correspondence with Wisconsin DNR.	The facility should notify DNR of the potential for this waste stream to discharge to Lake Monona under emergency circumstances.

Limiting Conditions

The following limiting conditions were encountered during the audit, and should be noted:

- A comprehensive visual inspection of all storage rooms, closets, etc., was not conducted due to time constraints; and
- It is important to recognize that due to practical constraints, this report presents general conclusions and does not necessarily identify all potential issues.

**Table of Findings with
Corrective Action and Status**

Table of Findings - Exceptions

Topic	Conformance Exceptions	Corrective Action	Status
Air – Acid Rain	The facility did not submit the Phase II Annual Compliance Certification for 2002 to the WDNR, as required by condition 4.a.(1) of the Acid Rain portion of the Operating Permit.	A copy of the 2002 Phase II Annual Compliance Certification was sent to EPA in February 2003. A copy was not sent to the Wisconsin DNR. MGE submitted a copy of the certification report to the WDNR in the 2003 Annual Compliance Certification Report for Blount.	Completed January 30, 2004.
Air - NESHAP	<p>The facility did not consistently include the volume of asbestos disposed in “cubic yards” as specified by Asbestos Waste Shipment Record instructions and NR 447.13(2)4.(a) (i.e., Shipment Records Nos. 740435 – 10/17/03; 740434 – 10/9/03; 740432 – 8/14/03; 740431 – 8/12/03; 740731 – 7/17/03; 740542 – 7/8/03).</p> <p>Note: Facility personnel stated that, with the exception of the 10/09/03 shipment, all shipments were less than one cubic yard in volume.</p>	MGE reviewed the Asbestos Waste Shipment Records and determined the volume of asbestos disposed was less than 1 cubic yard except on 10/9/03. MGE contacted the asbestos contractor on January 19, 2004, and requested all future waste shipments be documented in cubic yards. The contractor was not aware of a requirement to document in cubic yards.	Completed January 19, 2004.

Table of Findings - Exceptions

Topic	Conformance Exceptions	Corrective Action	Status
Air – Operating Permit	<p>Test plans and testing notifications submitted in 2003 for proposed particulate matter testing of boilers 7, 8 and 9 were deficient as follows:</p> <ul style="list-style-type: none"> • Test plan submitted in April 2003 did not include the test dates, a description of process and operational variables that may affect the source's emissions, a sketch showing the sampling point location relative to the nearest upstream and downstream flow disturbances, and an indication of the production rate and operation conditions under which the tests will be conducted, as required by NR 439.07(2); • Test plan submitted in September 2003 did not include a sketch showing the sampling point location relative to the nearest upstream and downstream flow disturbances, and an indication of the production rate and operating conditions under which the tests will be conducted, as required by NR 439.07(2); • January 2003 notice of test dates was not certified by the Responsible Official, as required by Part II.D.5 of the Operating Permit; and • February and December 2003 notices of test postponement were not certified by the Responsible Official, as required by Part II.D.5 of the Operating Permit. 	<p>MGE submitted test plans and testing notifications for Boilers 7, 8, and 9 in 2003. The testing was completed for Boiler 7 on November 6, 2003. The testing for Boilers 8 and 9 was postponed and is currently scheduled for March 30, 2004 and March 31, 2004. MGE resubmitted the notice of test dates and test plan for both boilers on February 25, 2004. In response to the audit findings, the plan included all information required under NR 439.07(2). The notice of test dates was also certified by the Responsible Official. MGE will make sure all future test plans, test notices, and test postponements meet these compliance requirements.</p> <p>In the 2003 Annual Compliance Certification Report for Blount, MGE's Responsible Official certified the 2003 test date notices and postponements based on information and belief formed after reasonable inquiry, the statements and information in those previously submitted documents was true, accurate and complete.</p>	<p>Completed February 25, 2004.</p> <p>Completed January 30, 2004.</p>

Table of Findings - Exceptions

Topic	Conformance Exceptions	Corrective Action	Status
Air – Operating Permit and ECA	<p>The following deficiencies were noted regarding calculation of HAP emission values and operating hours:</p> <ul style="list-style-type: none"> • The rolling 12-month operating hour values for P31 and P33 were not calculated for January-September 2003, as required by conditions I.J.3.b.(1) and I.K.3.b.(1) of the Operating Permit; and • The rolling 6-month values for HAP emissions from paper-derived fuel (PDF) firing were not calculated during 2003, as required by condition XI.A.5.a of the Environmental Cooperative Agreement. 	<p>Although MGE maintained records of operating hours throughout 2003, MGE did not start calculating the 12-month total until October 2003. Since the audit, MGE performed the calculations and was well below the permit limit.</p> <p>Although MGE maintained records of monthly HAP emissions throughout 2003, MGE did not start calculating the rolling 6-month value until December 2003.</p>	<p>Completed October 15, 2003.</p> <p>Completed December 19, 2003</p>
Air – Operating Permit	<p>The following deficiencies were noted regarding the PDF baghouse:</p> <ul style="list-style-type: none"> • The facility recorded pressure drop values for the PDF baghouse that were outside of the permitted range of 2-7 inches of water, established by condition I.M.1.b.(2) of the Operating Permit, on January 3, 6-10 and 13-16; February 17, 18, 24 and 25; March 17; and October 13 and 15, 2003; and • Notification of the pressure drop exceedances was not made by the next business day, along with the cause and corrective actions taken, as required by NR 439.03(4)(c). 	<p>The individual responsible for reporting these variances was trained to ensure similar instances will be reported to the DNR in the future. MGE also sent Madison General Fuels (MGF), MGE's contractor for the PDF (paper-derived fuel) operation, a copy of the current baghouse monitoring procedure. According to the procedure, MGF must provide MGE with a description of the pressure-drop exceedance and corrective actions taken.</p>	<p>Completed January 9, 2004.</p>

Table of Findings - Exceptions

Topic	Conformance Exceptions	Corrective Action	Status
Air – Operating Permit	<p>The facility currently determines the percent of heat input contributed by the PDF in boilers B28 and B29 using CEM data, rather than the heat input/steam charts required by Condition I.G.1.b.(2)(e) of the Operating Permit.</p> <p>MGE personnel stated that verbal approval was obtained from WDNR to utilize the alternate method.</p>	<p>As we previously discussed with the Department, MGE is currently using fuel usage and heat content data to perform this calculation. In the 2003 Annual Compliance Certification Report for Blount, MGE requested written approval from the Department to use this alternate method to determine compliance.</p>	<p>Submitted on January 30, 2004. Waiting for DNR response.</p>
Air – Operating Permit	<p>PDF composite samples are currently analyzed for heat content using ASTM D1989. Condition I.G.2.c.(4)(d) requires the use of ASTM D2015-85 for heat content determination of PDF samples. Written approval for the alternate method has not been received.</p>	<p>MGE submitted a request on January 13, 2004, to WDNR requesting written approval from the Department to use this alternate ASTM method.</p>	<p>Submitted on January 13, 2004. Waiting for DNR response.</p>

Table of Findings - Exceptions

Topic	Conformance Exceptions	Corrective Action	Status
Air – Operating Permit	The semi-annual monitoring report for 2003 summarizes exceedances based on the CEMS, but does not include either monitoring results or a summary of monitoring results for all monitoring, as required Conditions I.AB.1.a(1) and II.D.4 of the Operating Permit.	The authority cited for these conditions in the permit includes NR 439.03(1)(b) which specifically authorizes a permittee to submit a summary of monitoring results in lieu of all monitoring results. In the 2003 Annual Compliance Certification Report for Blount, MGE requested written approval from the Department as to whether the summary monitoring reports previously provided to WDNR met the Department's expectations under Permit Condition I.AB.1.a.(1). MGE previously received e-mail confirmation from WDNR personnel that the summaries provided met the requirements of the permit.	Completed January 30, 2004.
Air – Operating Permit	The facility submitted the Excess Emission Reports (EERs) for 2003 using the summary EER format, rather than the full EER format, required by Condition I.AB.2.a of the Operating Permit, and by NR 439.09(10). The summary EER format may only be used if written approval is received from the WDNR.	MGE has requested written approval from the WDNR to use summary formats in place of the full excess emission report format.	Completed January 26, 2004.
Air – QA/QC Manual	The calibration filters used to conduct the quarterly COMS audits for 2003 did not meet the range values established in the QA/QC Manual, when corrected for stack conditions. Specifically, the mid- and high-range values were not met for first, second, and third quarter of 2003.	MGE determined the facility has been using the correct opacity filters. The filter values in the QA/QC Plan were incorrect. MGE will modify the QA/QC Plan to reflect the correct values of the current filters.	The QA/QC Plan will be modified and resubmitted to WDNR by April 16, 2004.

Table of Findings - Exceptions

Topic	Conformance Exceptions	Corrective Action	Status
Air – ECA	The ECA requires all correspondence be directed between the liaisons established in the agreement. Correspondence regarding the estimation of HAP emissions was not directed to the DNR liaison, and was not signed by the MGE liaison.	All future correspondence will be directed to the DNR liaison and signed by the MGE liaison. The Agreement will be modified to include other authorized personnel.	
Emergency Planning – EPCRA/ CERCLA	<p>The following deficiencies were noted regarding initial notification (311 notification) and annual (Tier II Report) reporting for calendar year 2002 hazardous substances reporting (Tier II Report) as required by 40 CFR 370.25(a):</p> <ul style="list-style-type: none"> The Tier II Report did not include all storage codes and locations for reported chemicals (i.e., C,1,4, for storage of coal in 800 ton day bins within the building; D,1,4, for storage of sodium hydroxide and sulfuric acid in drums at the wastewater treatment building; C,1,4, for the 660-gallon tank located in the General Office Facility (GOF) generator room); and The Tier II Report did include inventory codes for No. 1 Fuel Oil. 	Tier II submitted in 2004 (for calendar year 2003) will have the corrected codes and locations included.	Completed March 1, 2004.
Emergency Planning – EPCRA/ CERCLA	<p>The following deficiencies and/or discrepancies were identified regarding Toxic Release Reporting (TRI Form Rs) required by 40 CFR 372.30:</p> <ul style="list-style-type: none"> The Form Rs submitted for Lead and Mercury did not include information for transfers of these materials to off-site recycling companies; and The facility did not conduct and/or document a threshold determination for processing trimethylbenzene (contained in the No. 1 Fuel Oil) during calendar year 2002 as required by 40 CFR 372.10(a)(3)(ii). 	<p>Will submit a revised Form R.</p> <p>Will document a threshold determination for trimethylbenzene.</p>	<p>To be completed by March 24, 2004.</p> <p>To be completed by March 24, 2004.</p>

Table of Findings - Exceptions

Topic	Conformance Exceptions	Corrective Action	Status
Emergency Planning – SPCC/OPA/FRP	<p>The SPCC Plan for the Blount Generating Station does not include all oil storage areas with potential for discharge by “spilling, leaking, pumping, pouring, emitting, emptying or dumping” as required by 40 CFR 112.7. Oil storage and/or use areas observed at the time of the site visit but missing from the Plan include the following:</p> <ul style="list-style-type: none"> Oil-filled hydraulic shearing and compacting equipment located in the PDF building; A fuel storage tank in the screen house basement that is no longer used and should be included in the plan or “permanently closed” as specified in the rule. One 55-gallon drum of waste transformer oil in Demin/RO area. Hydraulic reservoir for elevator located near the supply room. 	<p>This equipment contains two separate 35-gallon reservoirs. The equipment is, therefore, not subject to the SPCC rule. The reservoir capacity will be labeled on the equipment</p> <p>This was and is not an oil-containing vessel. It is a vacuum tank. It is not subject to the rule.</p> <p>The drum of waste transformer oil was removed and disposed.</p> <p>The SPCC plan will be amended to include this item.</p>	<p>Completed March 19, 2004.</p> <p>The tank will be labeled “water only” by March 24, 2004.</p> <p>Completed March 12, 2004.</p> <p>To be completed by March 24, 2004.</p>

Table of Findings - Exceptions

Topic	Conformance Exceptions	Corrective Action	Status
Emergency Planning – SPCC/OPA/ FRP	<p>The following deficiencies were noted regarding secondary containment or diversionary structures at the Blount Generating Station (40 CFR 112.7(c)):</p> <ul style="list-style-type: none"> • The following do not have secondary containment or diversionary structures and the plan does not describe why such measures are not practicable, nor does the plan provide for contingency planning and a written commitment of manpower and resources for response in lieu of secondary containment (40 CFR 112.7(d)): <ul style="list-style-type: none"> ○ New and used oil storage tanks located at 6-T-0 (no diking, berms or engineered diversionary structures); ○ Oil filled equipment throughout the plant; and ○ The emergency generator crank case/filter tank and drummed oil located in the Gas Pressure House are not secondarily contained and a floor drain located in the vicinity discharges to the lake via the city’s storm sewer; • The floor of the containment area for the 500,000 gallon fuel oil tank is comprised of gravel/earthen material. The SPCC Plan does not address the permeability of the gravel/earthen material; and • The SPCC Plan does not discuss containment volume for those storage and transfer areas located within secondary containment. 	<p>The SPCC plan will be amended to correct the deficiencies identified.</p>	<p>To be completed by March 24, 2004</p>
Emergency Planning – SPCC/OPA/ FRP	<p>The Blount Generating Station SPCC Plan dated July 2003 has the following discrepancies and/or deficiencies:</p> <ul style="list-style-type: none"> • Several sections of the plan do not follow the sequence outlined in 40 CFR 112.7, nor does the plan contain a cross-reference table (Sections 3.6 and 3.7 are out of order for example); 	<p>The SPCC plan will be amended to correct identified discrepancies and/or deficiencies.</p>	<p>To be completed by March 24, 2004</p>

Table of Findings - Exceptions

Topic	Conformance Exceptions	Corrective Action	Status
	<ul style="list-style-type: none"> The plan does not address the spill potential, the predicted rate of flow or quantity discharged from the facility as the result of each type of major equipment failure; most notably missing is the 500,000 gallon fuel oil storage tank (40 CFR 112.7(b)); The plan's diagram(s) do not show the location and contents of each container (40 CFR 112.7(a)(3)); The plan does not adequately address integrity testing of all bulk storage containers (tanks, drums, etc.) or explain why integrity testing will not be done and what measures will be used in lieu of testing – only the large storage tank is discussed in the plan (40 CFR 112.8(c)(6)); The plan does not address engineered controls for the prevention of overfill for all tank installations (i.e., storage tanks located in the basement that are filled remotely from the main floor) (40 CFR 112.8(c)(8)); and The plan does not adequately discuss the details of installation and operational start-up for additional equipment, procedures, methods and facilities necessary to meet the requirements. There are several sections of the plan that reference future installations but no specifics are included regarding installation dates, start-ups or what equipment these controls will be associated with specifically. (40 CFR 112.7) <p>Plan implementation deficiencies:</p> <ul style="list-style-type: none"> The plan states that loading/unloading instructions and vehicle departure information is posted at loading/unloading stations, while no postings were observed at the time of the site visit and reportedly were removed; 	<p>The signs have been reinstalled.</p>	<p>Completed March 12, 2004.</p>

Table of Findings - Exceptions

Topic	Conformance Exceptions	Corrective Action	Status
	<ul style="list-style-type: none"> The facility has not conducted quarterly inspections as specified in the plan; The facility has not conducted employee training on the plan as specified in the plan; and The plan states there are signs warning vehicles of overhead piping but no overhead piping was observed at the facility. <p>Note: Prior to July 2003, the facility did not have a certified, implemented SPCC.</p>	<p>Facility inspections were begun in fall 2003</p> <p>Employee training was begun in fall 2003.</p> <p>The SPCC plan will be amended to remove the reference to overhead piping.</p>	<p>Ongoing.</p> <p>Ongoing</p> <p>To be completed by March 24, 2004</p>
Regulated Materials – PCBs	<p>The following deficiencies were noted regarding the on-site storage of one partially full 5-gallon container of oil containing 55,400 ppm PCBs:</p> <ul style="list-style-type: none"> The container was not labeled in accordance with 40 CFR 761.40(a); The PCB Liquid was not disposed within 1-year of generation as required by 40 CFR 765(a)(1); and The container was not moved to a designated PCB storage unit within 30-days of generation as required by 40 CFR 765(c)(1). 	<p>Container was immediately labeled, moved to the PCB storage facility, and was sent to a disposal facility on February 26, 2004.</p>	<p>Completed.</p>
Waste – Hazardous	<p>The facility's hazardous 2002 Hazardous Waste Report Certification was not signed by an Authorized Representative of the facility as required by NR 610.08(g)5. and NR 600.03.</p> <p>Note: The report was signed by the Senior Environmental Specialist.</p>	<p>Senior Environmental Specialist will ensure the proper person signs the reports and procedures and reporting notes are updated to reflect the proper protocol.</p> <p>Previous report certifications for 2000, 2001, and 2002 will be resubmitted to the DNR with paper signatory.</p>	<p>Completed March 1, 2004.</p> <p>To be resubmitted by March 24, 2004.</p>

Table of Findings - Exceptions

Topic	Conformance Exceptions	Corrective Action	Status
Waste – Hazardous	The facility did not submit a copy of its RCRA Contingency Plan (emergency management plan) to the “local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services” and “the WDNR” when acting as a large quantity generator of hazardous waste during September 2003 as required by NR 630.22(b).	Update procedure to include this submission requirement and include on MGE’s regulatory calendar and compliance requirement list. Will update RCRA Contingency Plan to reflect current layout and staff in anticipation of the need to submit in the future.	Completed March 15, 2004. To be completed by May 15, 2004.
Waste – Hazardous	<p>The facility operated as a small quantity generator of hazardous waste during 11 of 12 months of review. The following deficiencies/ discrepancies were noted regarding the facility’s hazardous waste management program as required for SQGs by NR 610.05, NR 610.08 (1)(w) and (2)(a);</p> <ul style="list-style-type: none"> • The facility had not provided hazardous waste training to personnel in the information management systems group, whom are responsible for recycling/disposal of cathode ray tubes; • The facility had not characterized waste gaskets generated by application of Loctite 790 Cleaner containing 50-75% methylene chloride (a F002-listed waste) as required by NR 610.05; • Shop towels utilized to absorb spent trichloroethylene solvent (C-60 Solvent Cleaner/Degreaser hazardous waste code F001) from degreased metal parts in the maintenance shop and electrical shop were not managed as a hazardous waste (labeling and inspections) 	<p>Appropriate information management personnel were trained on January 8, 2004. This training requirement will be added to the Corporate Training database.</p> <p>The product containing methylene chloride has been removed from use at Blount. An alternative product is being tested.</p> <p>C-60 has been phased out at Blount, and a replacement product has been tested and approved for use. Any cans found</p>	<p>Completed.</p> <p>Completed.</p> <p>Letter distributed January 29, 2004.</p>

Table of Findings - Exceptions

Topic	Conformance Exceptions	Corrective Action	Status
	<p>prior to off-site laundering;</p> <ul style="list-style-type: none"> Weekly inspections of the satellite accumulation area located in the instrument shop were not consistently documented on the Hazardous Waste Inspection Log (i.e., weeks of 1/1/03 thru 4/16/03; 5/5/03 thru 5/19/03; 6/2/03; 7/21/03; 8/4/03 thru 8/18/03; 9/8/03; 9/22/03; 10/06/03; 10/20/03 thru 11/10/03; 11/24/03; and 12/8/03); A cursory review showed weekly inspections of the satellite accumulation area located in maintenance shop were not consistently documented on the Hazardous Waste Inspection Log; and Inspection forms utilized did not include the “time” of the inspection as required by NR 610.08(o). 	<p>during the audit were promptly removed for disposal. A memo was sent reminding employees this product is no longer in use.</p> <p>Manager of Blount Maintenance and Stores will review the requirements with appropriate staff. Senior Environmental Specialist will cover the requirements again during the Maintenance Safety Meetings in March.</p> <p>This has been completed for all applicable forms.</p>	<p>Will be completed by March 16, 2004.</p> <p>Completed.</p>

Table of Findings - Exceptions

Topic	Conformance Exceptions	Corrective Action	Status
Waste – Hazardous/ Universal	<p>The following deficiencies / discrepancies were noted regarding on-site waste management of spent Lithium and Ni-Cd batteries, spent mercury thermostats and spent mercury-containing spent lamps:</p> <ul style="list-style-type: none"> • A spent fluorescent lamp leaning against south basement wall beneath the No. 9 boiler, a broken incandescent lamp observed in a trash can adjacent to the No. 7 boiler; a broken fluorescent lamp located in the “Chemical Room”; and three “burnt-out” halide bulbs located on the floor near the “Chemical Room” were not managed as universal waste in accordance with 40 CFR 273; and • A box of spent fluorescent lamps (approximately 10 bulbs) located between the coal yard supervisors’ office and Turbine No. 3 were not managed in closed containers in accordance with 40 CFR 273.13 (d), were not marked with the accumulation start date in accordance with 40 CFR 273.15(c), and were not labeled with the specific universal waste labeling requirement as required by 40 CFR 273.14 (e). 	<p>Blount personnel will be retrained on universal waste management during March 2004 safety meetings. (Blount personnel were last trained in November.)</p>	<p>Will be completed March 25, 2004.</p>

Table of Findings - Exceptions

Topic	Conformance Exceptions	Corrective Action	Status
Waste – Used Oil	<p>Containers holding used oil were not consisting labeled with the words “used oil” as required by NR 590.13(4) as provided by the following examples:</p> <ul style="list-style-type: none"> • One 5-gallon container of used oil from the air handling system blow-down in the fly-ash loading arm room was not labeled; • One 55-gallon drum of used oil near the No. 6 Turbine was labeled waste oil as opposed to “used oil” as required by NR 590.13 (4); and • One 55-gallon drum of used oil located in the RO/Demineralization room was labeled “lube oil” as opposed to “used oil”. 	<p>The existing containers have been labeled. A label is being designed with the words “Used Oil”. This label will be provided to staff in charge of the Used Oil at Blount to ensure this label is included on each container of used oil in the future. Personnel who work in that area will be reminded of the regulatory requirements during the March 2004 safety meeting.</p>	<p>Will be completed March 25, 2004.</p>
Water – POTW	<p>The facility’s MMSD permits IP-8 (Part 2, Section 2.(c)ii.) and NTO-85C (Part 2, Section 2) require that all reports shall be signed and sworn by a responsible corporate officer. The facility does not include a certification statement with its semi-annual monitoring reports required under both MMSD permits. Additionally, for permit IP-8; the semi-annual compliance report does not include a summary of the self-monitoring results obtained during the period and the flow data for the compliance sampling day (Part 2, Section 2, (b)i. and ii.)</p>	<p>Semi-annual compliance report for second half of 2003 was resubmitted in updated, reformatted version to incorporate day flow information.</p> <p>All future reports sent to MMSD will include certification statements. Have requested MMSD send us a letter stating the new format meets permit requirements. They said they will do so in letter form.</p>	<p>Completed January 30, 2004.</p>

Table of Findings - Exceptions

Topic	Conformance Exceptions	Corrective Action	Status
Water – WPDES	The facility periodically discharged emergency generator cooling water through an unpermitted outfall until May 2003. The facility believed this waste stream was being discharged through outfall 003, which is permitted under WPDES permit WI-0001961 to discharge this waste stream (and others). The facility recently discovered that the cooling water is discharged through a different outfall (009), which is connected to the City of Madison's storm sewer system.	No correction action needed because it had already been identified by MGE personnel and reported.	

Table of Findings - Observations

Topic	Conformance Observations	Corrective Action	Status
Air – Operating Permit	Documentation (i.e., dated materials) was not sufficient to demonstrate that the rolling 12-month operating hour values for boilers B21, B22 and B23 were calculated within 15 working days of the end of each month for January-September 2003, as required by condition I.A.4.b.(1) of the Operating Permit. Note: MGE personnel stated that calculations were conducted within 15 days, although documentation of the calculation date was not recorded.	Although the calculations were performed within 15 business days of the end of each month, MGE did not start date stamping the calculations until October 2003.	Completed October 15, 2003.
Air – Operating Permit	The facility currently records the pressure drop once per operating day, despite operating the PDF system for longer than 8 hours per day. Condition I.M.1.c.(2) of the Operating Permit requires recording of the pressure drop at least once every 8 hours of operation. It is not clear that recording once per operating day is consistent with the once per 8-hour requirement.	MGE sent Madison General Fuels (MGF) a copy of the current baghouse monitoring procedure. According to the procedure, MGF will provide MGE with pressure-drop readings for every eight hours of operation.	Completed January 9, 2004.
Air – General	The facility documents required coal yard inspections and activities on several forms on a daily basis. The large volume of forms was not maintained in an organized manner, and so a thorough review to determine if all required inspections were conducted during 2003 was not practical.	MGE reorganized the forms so they are in chronological order. A new procedure was developed by Corporate Records to ensure future forms are organized chronologically.	Completed January 9, 2004.

Table of Findings - Observations

Topic	Conformance Observations	Corrective Action	Status
Air – Operating Permit	Filters A3131, TW04 and TW05 were used to calibrate #7 and #8 COMS on September 11, 2003. The certification of these filters expired September 4, 2003. The filters were recertified October 21, 2003, and found to be acceptable for continued use.	The expiration dates of the opacity filters were not available to Blount technicians in the past. MGE has created forms for technicians who use the opacity filters. The technicians are required to provide filter values and expiration dates to ensure expired filters are not used.	Completed January 9, 2004.
Air – Operating Permit	The Annual Compliance Certification for 2002 does not identify each permit condition; the compliance status of the facility in relation to each condition; whether compliance was continuous or intermittent; and the method of determining the compliance status, as required by condition II.N of the Operating Permit. Compliance Certifications for previous years were submitted in the correct format. Note: The facility received an e-mail from the WDNR on January 17, 2003 stating that the “short form” reporting was acceptable.	MGE believes the report satisfied all permit requirements and follows the general format and instructions received from WDNR representatives on or about January 17, 2003. MGE plans to get clarification from the Department this year for future submissions.	Will be completed by December 2004.
Air – Operating Permit	Documentation was not sufficient to demonstrate that all instruments used to measure operational variables for air pollution control equipment are calibrated at least once per year (e.g., pressure drop monitors on baghouses), as required by Condition II.C.13 of the Operating Permit. Note: Condition II.C.13 of the Operating Permit does not explicitly state that records of calibrations must be maintained.	MGE will develop a system to document calibrations.	Will be completed by January 2005.

Table of Findings - Observations

Topic	Conformance Observations	Corrective Action	Status
Regulated Materials	<p>Two self-luminous (tritium) exit signs located in the PDF building were not labeled with disposal instructions. These signs can only be disposed through return to the manufacturer.</p> <p>Additionally, the facility does not have the original transfer receipts for the self-luminous exit signs to document that the contents of the products contain either tritium, krypton-85, or promethium-147 and are exempt from the licensing requirements of 10 CFR 30.3.</p>	<p>Labels with disposal instructions were placed on the signs on February 25, 2004. The information on the signs says they contain tritium and, therefore, are exempt from licensing.</p>	Completed.
Water – Categorical Discharge	<p>Categorical requirements for direct dischargers specify compliance with individual waste stream limits even in the case of a combined stream discharge (NR 290.12(1)(e) and 40 CFR 423.12(11)&(12)). Total suspended solids (TSS) and oil and grease (O&G) are limited for low volume wastes but not for once-through cooling water, a significantly larger volume discharge. The facility is not able to show that low volume discharge streams are in compliance with the specified concentration limits without the benefit of dilution with the high volume, once-through cooling water discharge.</p>	<p>A comparison was done between normal and low-flow conditions. In all cases, all results were within permit limits.</p>	Completed February 11, 2004.
Water – POTW	<p>The facility semi-annually samples a groundwater seepage stream for total cyanide as required in MMSD Permit NTO-85C. The local limit for total cyanide is 0.1 mg/l. Both semi-annual analyses for 2003 were above the local limit (0.22 mg/l and 0.17 mg/l), however, the samples were taken at the groundwater seepage collection point (as specified in the permit) and do not indicate what the actual cyanide levels would be at the facility's discharge point (007). The facility notifies MMSD when the cyanide number is above the limit. MMSD typically states that it is acceptable based on the amenable cyanide number (no local limit for amenable cyanide). The permit's general conditions require repeat sampling within 30 days in the event of a violation. It is unlikely that this discharge would cause a violation at the facility's 007 discharge to MMSD (permitted under IP-8), however the facility has no documentation to that affect.</p>	<p>MGE will sample both outfall 007 and the groundwater source simultaneously. A letter will also be sent to MMSD to have them clarify the cyanide limit is to be met at the sanitary sewer discharge point at 007.</p>	Completed February 24, 2004.

Table of Findings - Observations

Topic	Conformance Observations	Corrective Action	Status
Water – SDWA	Two drinking water fountains at the Blount Generating Station were observed to have point-of-use treatment devices, potentially qualifying the facility as a Public Water Supplier (i.e., providing treated water to more than 25 persons). Based upon phone discussions with the WDNR, point-of-use treatment devices are only regulated by the WDNR when utilized to remove “contaminants” from water and not when utilized for “aesthetic purposes” in conjunction with water supplied by an approved Public Water System. It is the auditors’ understanding that the point-of-use filters are for aesthetic purposes.	These filters are for aesthetic purposes only. No further action.	Completed.
Water – WPDES	The facility has a groundwater seepage stream (< 2 gallons per minute) that is a permitted discharge to the MMSD. However, the facility is designed to divert sump flows, (including this groundwater seepage stream), to the wet well in the coal yard, which ultimately discharges to Lake Monona under WPDES permit WI-0001961. The diversion will only happen if the Blount Generating Facility loses power and the basement flood pump starts up. The facility has not had a diversion of this type to date, but this pollutant stream was not identified in the WPDES permit application or subsequent correspondence with Wisconsin DNR.	Facility will re-route emergency pump discharge piping to sanitary sewer outfall 007.	Completed on March 19, 2004.

APPENDIX



The Deer Valley School District in Phoenix, Arizona, began using biodiesel in 1999 following a state mandate that school districts use alternative fuel vehicles to curb air pollution. In a total fleet of 250 vehicles, 140 school buses and 5 maintenance trucks run on biodiesel. These vehicles will travel 2.5 million miles annually in Deer Valley.

The buses use a B20 blend of biodiesel mixed on site by school district staff; the other vehicles run on B100. Vehicles run on both reused oil and virgin biodiesel, depending on suppliers and availability, with no apparent differences in performance. While the school district spends more money on fuel, its alternative fuels program receives state grant money. The district also encourages surrounding school districts to use biodiesel so they can order bulk quantities at a reduced price.

A blind pilot study in Deer Valley revealed that school bus drivers noticed performance increases with biodiesel. They were baffled, however, by what they perceived as the smell of hot dogs throughout the day—apparently from biodiesel made from used cooking grease.

For more information, call Bill Kohn at (602) 467-5072.

Clean Alternative Fuels: Biodiesel

One in a series of fact sheets



In 1895, Dr. Rudolf Diesel developed the “diesel” engine with the intention of running it on a variety of fuels, including vegetable oil. In fact, when Diesel demonstrated his engine at the World Exhibition in Paris in 1900, he used peanut oil as fuel. Since that time, however, the diesel engine has been modified to run on petroleum-derived fuel (petrodiesel) because historically it was the least expensive fuel available.

Today, the diesel engine is still capable of running on “biodiesel” fuel, which can be produced from a variety of renewable sources, including soybean oil, canola oil, sunflower oil, cottonseed oil, and animal fats. These sources can be obtained from agricultural feedstocks or by recycling used oil such as cooking grease. Most biodiesel produced in the United States is made from soybean oil due to this feedstock’s abundance.

Biodiesel is usable in its pure form, known as “neat biodiesel” or B100. In addition, it is available in various blends with petrodiesel, the most common of which is known as B20 (20 percent biodiesel and 80 percent petrodiesel). It is also used in smaller percentages as a lubricating fuel additive.

AVAILABILITY

The biodiesel industry is continually expanding. In 1996, only 2 companies were registered as biodiesel suppliers; in 1999, that figure had climbed to 13. Together, these companies have invested millions of dollars in developing biodiesel manufacturing plants. In addition, two major U.S. vehicle manufacturers have

begun biodiesel research initiatives.

Biodiesel is one of the only alternative fuels usable in any conventional diesel engine with little or no modification to the engine or fuel system. More than 40 federal and state fleets are already using biodiesel blends in their existing diesel engines.

EMISSIONS CHARACTERISTICS*

Actual emissions will vary with engine design; these numbers reflect the potential reductions offered by a biodiesel blend (B20) and pure biodiesel (B100), relative to conventional diesel.

- Reductions in carbon monoxide emissions of 10 percent (B20) and 50 percent (B100).
- Reductions in particulate emissions of 15 percent (B20) and 70 percent (B100).
- Reductions in total hydrocarbon emissions of 10 percent (B20) and 40 percent (B100).
- Reductions in sulfate emissions of 20 percent (B20) and 100 percent (B100).
- Increases in nitrogen oxide emissions of 2 percent (B20) and 9 percent (B100).
- No change in methane emissions using either B20 or B100.

* Estimates based on biodiesel’s inherently “cleaner” chemical properties with an engine that takes full advantage of these fuel properties.

To encourage its use, most major diesel engine manufacturers have affirmed that using B20 in their equipment will not void their warranties. Although B100 is also usable in any diesel engine, its use might void warranties.

According to the National Biodiesel Board (NBB), biodiesel can be made available in every state, even if no fueling stations exist. Suppliers can deliver fuel anywhere in the country, either in pure or blended form. Farmers often order biodiesel through cooperatives. A list of fuel marketers can be obtained by contacting NBB.

AFFORDABILITY

B100 can be purchased for \$1.95 to \$3 per gallon, depending on the feedstock and the supplier. In general, B20 costs 30 to 40 cents more per gallon than conventional diesel. Although biodiesel costs more than petrodiesel, fleet managers can make the switch to alternative fuels without purchasing new vehicles, acquiring new spare parts inventories, rebuilding refueling stations, or hiring new mechanics. In addition, buying biodiesel in bulk quantities decreases the fuel's cost.

PERFORMANCE

Biodiesel maintains the same payload capacity and range as conventional diesel, and provides similar horsepower, torque, and fuel economy. Biodiesel has a higher cetane number than conventional diesel, which increases the engine's performance. It also serves as a high-quality lubricant

and can enhance the life of heavy-duty engines.

Biodiesel vehicles can have cold start problems relative to petrodiesel, but this is more of an issue for B100 than B20 fuels. For example, B20 freezes at temperatures 3°F to 5°F higher than petrodiesel, but it has been used in upper Wisconsin and Iowa during -25°F weather with no reported problems. B100 will begin to freeze at 25°F, however. Vehicle owners can solve cold start problems with biodiesel in the same manner as with conventionally fueled vehicles (e.g., using engine block or fuel filter heaters or storing the vehicles near or in a building).

SAFETY

Biodiesel is biodegradable, which means it dissipates quickly after a spill. Biodiesel has a high flashpoint and low volatility so it does not ignite as easily as petrodiesel, which increases the margin of safety in fuel handling. In fact, it degrades four times faster than petrodiesel and is not particularly soluble in water. It is nontoxic, which makes it safe to handle, transport, and store. When blended with petrodiesel, the spill's petrodiesel portion is still a problem, but less so than with 100 percent petrodiesel. As with all vehicles, adequate training is recommended to operate and maintain biodiesel vehicles.

MAINTENANCE

Maintenance requirements for B20 vehicles and petrodiesel vehicles are the same. B100 does pose a few concerns, however. Biodiesel acts as a sol-

vent to some fuel system components and concrete-lined tanks. This effect can release deposits accumulated on tank walls and pipes from previous diesel fuel storage, initially causing fuel filter clogs. As a result, vehicle owners should change the fuel filter after the first tank of fuel.

In addition, biodiesel will soften and degrade certain types of elastomers and natural rubber compounds over time, which can impact fuel system components such as fuel hoses and fuel pump seals. This is less of a concern with biodiesel blends than with B100. Manufacturers recommend replacing these parts with compatible elastomers. Some newer vehicles have biodiesel-compatible components, but users should contact their vehicle manufacturers for specific information.

For More Information

EPA Alternative Fuels Web Site
www.epa.gov/otaq/consumer/fuels/altfuels/altfuels.htm

National Biodiesel Board
1907 Williams Street, Suite B
P.O. Box 104898
Jefferson City, MO 65110-4898
Phone: 573 635-3893 or 800 841-5849
Fax: 573 635-7913
E-mail: biodiesel@socket.net
Web site: www.biodiesel.org

Alternative Fuels Data Center
Web site: www.afdc.nrel.gov

National Alternative Fuels Hotline
Phone: 800 423-1DOE



MG&E Stormwater Treatment Project – Treating Runoff Pollution from an Urban Area

October 28, 2003

Background and Objectives

Reducing runoff pollution from highly developed urban areas is a major challenge to protecting our water resources. Densely developed urban lands have very high pollution rates and minimal or no land available to install pollution control devices. If water quality improvements to the Madison lakes are to be achieved, reducing pollution from urban lands will be a priority.

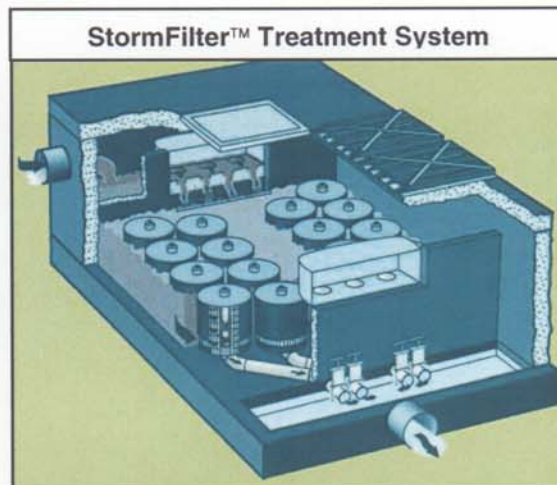
Stormwater runoff from urban areas such as parking lots contains many pollutants including: sediment, lead, cadmium, phosphorus, and oil drippings from cars and other vehicles. These pollutants have an adverse effect on aquatic environments such as Lake Monona. Storm sewers are a direct conduit for these pollutants to local water bodies during rainfall events.

MG&E installed a StormFilter™ stormwater treatment system to capture and treat the runoff from a parking lot across from MG&E's General Office Facility, in downtown Madison. MG&E had several objectives in implementing this project:

- Reduce stormwater pollution to Lake Monona from a 1.4 acre parking lot on their property.
- Provide a visible location to demonstrate urban stormwater treatment technology.
- Provide an information and education opportunity to various local groups on one approach to stormwater quality management.
- Install a stormwater treatment device to test the quality of runoff from the parking lot, and measure pollution reduction.
- Provide a site that could be used to measure the pollution reduction effectiveness of different types of filter media.

Description of the Treatment Technology

MG&E, in cooperation with the DNR, evaluated various commercial stormwater treatment devices before selecting a system manufactured by Stormwater Management Inc. (SMI). The SMI StormFilter™ system consists of an underground concrete vault housing filter canisters. A “flow-splitter” manhole located upstream from the StormFilter™ shunts the larger runoff flows around the treatment device. The “first-flush” of stormwater is diverted into the system to be treated. An initial chamber traps litter and larger sediment particles in the runoff. Smaller



pollutants are filtered out in the filter canisters. A system of float-operated valves controls the flow through the filters. The manufacturer recommends that filter media be replaced approximately once a year. The filter canisters and valves are non-corrosive plastic to minimize maintenance issues. Various types of media can be used in the filter such as perlite, compost pellets, granular activated carbon, or other material. According to manufacture's literature, the StormFilter™ has been shown to achieve a 70% sediment removal rate.

Future Applications at the Site

Several innovative applications are being explored for the site. MG&E has been in discussions with the USDA Forest Products Laboratory (FPL) in Madison, WI. The FPL is developing new filter media from logging operation "waste products". These materials may be used in the StormFilter™ canisters to remove pollutants from stormwater. Testing at the FPL is ongoing with hopes that the new media may be used at the MG&E site in the near future.

Also, MG&E consulted with the United States Geologic Survey (USGS) before the device was installed to facilitate future monitoring of the system. Special modifications were incorporated into the StormFilter™ to allow for easier installation of monitoring equipment to measure stormwater quality before, and after treatment.

Finally, because the StormFilter™ is completely visible through open grates on top of the vault, the site allows for a unique opportunity for people to observe stormwater treatment "in action". School groups, government agencies, industries, and other public groups can learn basic principals of stormwater quality, impacts, and treatment options from this real-world classroom. MG&E looks forward to working with the community in raising the awareness of stormwater management and protecting our water resources.



VBA and JWhitehouse Qualifications and Personnel

Van Breusegen & Associates, Inc. (VBA) has been providing environmental auditing, consulting and management system services to industrial and commercial clients since October 1994 and has completed over 700 environmental compliance projects in 48 states in the U.S., three provinces in Canada, and two states in Mexico.

Specific to environmental compliance services, VBA personnel have completed numerous projects throughout the United States including regulatory applicability determinations, new source air permit applications; Title V air permit applications; air dispersion modeling; emission inventories; SPCC / SWPPP plans; NPDES permit applications; POTW permit applications; Phase I assessments; TRI reports; RCRA training; and development and implementation of comprehensive environmental management programs. Additionally VBA has participated in large-scale property transaction and/or business due diligence assessments throughout North America that included ASTM, CSA and multi-national EH&S compliance.

Specific to environmental auditing, VBA personnel have conducted comprehensive environmental compliance audits and protocol-specific compliance audits of more than 275 industrial and commercial facilities located in the United States, Canada and Mexico. Audit protocols covered include air, hazardous waste management, storm water management, solid waste management, Emergency Planning and Community Right to Know (EPCRA), pesticide management, PCBs, TSCA, USTs, ASTs, Spill Prevention Control & Countermeasure (SPCC), wastewater, remedial actions, drinking water, Title 33 (Coast Guard), California Business Plans, Proposition 65 (California), and DOT. In conjunction with these audits, VBA personnel have worked with several electronic audit reporting systems, including Lotus Notes EQM, Microsoft Access, and Microsoft Word.

Specific to health and safety auditing, JWhitehouse & Associates, Inc. (JWA) personnel have conducted health and safety audits of over 100 facilities throughout the United States, Canada and Europe. Audit protocols/standards are adapted to meet the client's needs and have included audits to determine compliance with OSHA regulations, company procedures and guidance documents and best management practices (including OSHA's Voluntary Protection Program requirements). Risk-based assessments and due diligence evaluations have also been completed as part of business and property transactions. JWA personnel have provided health and safety consulting services to GE Power Systems, GE Nuclear Energy, Kimberly-Clark Corporation, Von Roll IsolaUSA, Pfizer, Revlon, BestFoods Baking Company, Koch Industries, Finch, Pruyn & Company, Albany City School District and New York State United Teachers.

Client Summaries – Compliance Auditing

Anheuser-Busch Companies

VBA personnel actively participate as team members for the Anheuser-Busch Companies (A-BC) environmental audit program and have done so since 1992. Anheuser-Busch Companies and subsidiary companies are recognized industry leaders in the arena of environmental compliance and environmental compliance auditing. VBA personnel are specifically recognized by ABC for their ability to complete any of ABC's established environmental protocols, their ability to draft accurate audit exceptions, their client management skills and their attention to detail. VBA personnel have completed audits of breweries, can manufacturing plants, lid manufacturing plants, glass manufacturing plants, grain elevators, theme parks (Sea World Parks and Busch Gardens Parks), label printing operations, malting plants, box printing operations and rail car

refurbishing operations. In calendar year 2003, VBA personnel will participate in and/or lead environmental audits of 12 A-BC operations.

Additionally, prior to divestiture by Anheuser-Busch Companies, VBA personnel conducted environmental audits/reviews of 25+ Campbell Taggart, Inc. (CTI/Earthgrains) facilities. As part of the CTI audit program, VBA provided updated storm water pollution prevention plans and SPCC plans for most CTI operations.

Koch Industries, Inc.

Beginning in 1999, VBA was selected to conduct environmental compliance audits as a subcontractor for the prime auditing consulting firm for Koch Industries, Inc. (KII), the second largest privately held company in the United States (estimated annual revenues = \$40 Billion; Forbes Magazine – December 2002). Following technical presentations in the spring of 2000, VBA was awarded the entire fiscal year 2000 environmental compliance audit program for KII, completing 26 audits in the United States and Canada. VBA was subsequently exclusively selected by KII to perform environmental compliance audits for 31 facilities in calendar year 2001, 30 facilities in calendar year 2002 and has been selected as the exclusive provider of environmental compliance audits for calendar 2003. VBA personnel have completed audits of petroleum terminals, asphalt emulsion plants, sulfuric acid plants, natural gas fractionators, membrane manufacturing plants, flare manufacturing plants, heat exchanger manufacturing plants, petroleum gathering areas, cryogenic ammonia storage and transportation facilities, propane storage and transportation facilities, coal handling facilities, and petroleum gathering operations.

Koch Materials Company

During calendar year 2001 and 2002, VBA completed Federal, State and Local environmental applicability determinations for 81 Koch Materials Company facilities located in 30 states. These determinations included a one day site visit and Excel deliverable listing all regulations and identified as applicable, conditional or non-applicable. Conditional and applicable categories additionally contained site-specific regulatory guidance.

Koch Chemical Technology Group

Following divestiture by Koch Industries, Inc. in calendar year 2001, Koch Chemical Technology Group (KCTG) selected VBA to conduct environmental compliance audits of nine (9) industrial facilities located in the United States and Canada for calendar year 2002 and five (5) facilities in calendar year 2003.

Koch Pipeline Company

Following divestiture by Koch Industries, Inc. in calendar year 2001, Koch Pipeline Company selected VBA to conduct environmental compliance audits of twelve (12) industrial facilities located in the United States for calendar year 2002 and recently selected VBA as the exclusive provider of environmental audits in calendar year 2003.

3M

Following qualification proposals and capability presentations from multiple national firms in 2001, 3M selected VBA to conduct program specific audits of twelve North American facilities in calendar year 2002 and recently selected VBA for 14 audits in calendar 2003.

Heinz

Following resource capability proposals and demonstration audits in 2002, VBA was selected to enter into a master services agreement for environmental applicability determinations and multi-media environmental compliance audits for the Heinz Corporation.

General Electric – Structured Finance Division

VBA, in conjunction with JWA, was selected in third quarter 2002 to conduct a comprehensive EH&S conformance audit and Phase I ESA in support of a large financial package provided by GE Structured Finance Division to a privately owned Theme Park. VBA and JWA were sole-sourced on this project based upon both auditing and theme park experience.

Interstate Brands Corporation

Following resource and capability demonstration audits by several environmental firms, VBA was exclusively selected to conduct environmental compliance reviews of IBC Central Division bread and cake manufacturing facilities. In addition to auditing, VBA personnel provide training on conducting audits to IBC personnel and assist IBC personnel with populating the Environmental Quality Manager (EQM) Lotus Notes database licensed from the American Bakers Association. To date, VBA has conducted audits of seven IBC facilities in the Central Division, four facilities in the Western Division, and three facilities in the Eastern Division.

Kimberly-Clark Corporation

As a part of a multinational team led by InteGreyted Environmental Consultants, LLC, VBA personnel have participated in comprehensive environmental compliance audits of 26 domestic and international facilities including pulp and paper manufacturing, tissue manufacturing, medical equipment manufacturing, forestry management, R&D and ink manufacturing. As an integral component of the InteGreyted Environmental Consultants teaming arrangement, VBA personnel are members of the Kimberly-Clark preferred acquisition and divestiture team.

Union Tank Car Company

In a partnership/teaming arrangement with Environmental Compliance and Engineering, Inc., VBA was selected to conduct multimedia environmental compliance audits of fourteen UTLX railcar manufacturing and/or refurbishing facilities in calendar year 1999. The ECE / VBA team was subsequently selected to conduct of all UTLX facilities in 2001, thereby becoming the first consultants to be consecutively selected for the UTLX biennial audit program.

BAMA Foods

VBA was engaged by BAMA Foods to develop and implement an auditing program for all BAMA manufacturing plants. VBA developed facility specific audit protocols, conducted baseline facility audits and developed facility specific compliance checklists and schedules. BAMA Foods used the VBA-developed program as a building block toward ISO 14000 Certification.

Earthgrains

VBA personnel have participated and/or lead environmental compliance audits of 35 Earthgrains (formerly Campbell Taggart) facilities (including bread, bun, dough and cake plants) located throughout the United States. These audits/reviews typically included fleet operations, covered from 8 to 13 protocol topics and involved population of a Lotus Notes audit database.

Cape Cod Potato Chip

VBA was engaged by Cape Cod Potato Chips (CCPC) to develop and implement an auditing program for their Hyannis, Massachusetts manufacturing plant. VBA developed facility specific audit protocols, conducted a baseline facility audit and developed a facility specific compliance checklist and schedule. CCPC uses the facility specific checklist for on-going self-assessments.

Purina Mills, Inc.

VBA has conducted multimedia independent environmental compliance audits of ten Purina operations located through out the United States. Facilities audited include graining, milling and chow manufacturing operations, swine management operations, and research and development operations (i.e., swine, bovine and equine). Additionally, VBA completed environmental applicability determinations for twelve Purina Mills facilities located regionally throughout the United States.

Additionally, VBA personnel have participated in multi-media environmental compliance audits for The Pillsbury Company, the United States Air Force Academy, Siemens, BNSF Railroad, Pentair Corporation, The Toro Company, Stella Foods, Honeywell, Gardner Denver, Raskas Dairy, GE Lamp Division and Dana Corporation.

References for VBA's project work can be provided as needed.

Personnel

VBA personnel are active audit team leaders, audit team members and actively conduct compliance projects for multiple private and public corporations whose annual revenues range from one billion to over 40-billion. The following paragraphs provide brief biographical sketches for VBA personnel who will potentially be engaged in administration and execution of ADM Environmental Compliance Audits and/or Applicability Determinations.

René van Breusegen, E.I.T., President

Mr. van Breusegen is a degreed chemical engineer with 18 years of environmental engineering and consulting experience. He has participated in and/or led over 150 environmental compliance audits of industrial and commercial facilities located in over 30 states in the U.S., Canada and Mexico. Additionally, Mr. van Breusegen has completed over 100 compliance projects including new source permitting, emission inventories, Title V permitting, SARA reporting, SPCC plan preparation, SWPP plan preparation large scale due diligence assessments including ASTM and environmental compliance, environmental fatal-flaws analysis, and stand-alone environmental applicability determinations for facilities located throughout North America.

Prior to founding VBA, Mr. van Breusegen worked for 10 years in the environmental engineering/consulting and waste management industries.

Emmett Keegan, Associate

Mr. Keegan holds a Master of Science degree in Environmental Engineering and a Bachelor of Science degree in Biology and has 11 years compliance enforcement and compliance consulting experience. Mr. Keegan has participated in or led over 80 multi-media environmental, health and safety compliance audits located in 20+ states and two provinces of Canada; and has completed over 20 stand-alone environmental applicability determinations for facilities located throughout the United States. Additionally, Mr. Keegan has completed new source air permits, Title V

permits, NSR applicability determinations, PSD applicability determinations, Phase I assessments, emission inventories and air source modeling.

Prior to joining VBA, Mr. Keegan worked with CH2M Hill's Chicago office for one and one-half years and for over seven years with EPA Region V in air and wastewater enforcement.

Colene Tschoepe, Associate

Ms. Tschoepe holds a masters degree in Environmental Science and has 10 years of environmental consulting/auditing experience. Ms. Tschoepe has conducted over 80 environmental compliance audits and over 30 stand-alone environmental applicability determinations of industrial facilities located throughout North America. Ms. Tschoepe has served as an auditor for the United States Postal Service, Burlington Northern Santa Fe Railroad, Anheuser-Busch Companies, Pentair Corporation, Pillsbury Company, Interstate Brands Company and Coultier Foods.

Prior to joining VBA, Ms. Tschoepe's experience includes five years of consulting experience and five years in private industry.

Sharon Roberts, Associate

Ms. Roberts is a degreed chemical engineer with 16 years of industrial and consulting experience. Ms. Roberts has participated in over 75 comprehensive environmental compliance audits and completed over 10 stand-alone environmental applicability determinations for industrial facilities throughout the United States and Europe. Additionally, Ms. Roberts has completed environmental compliance projects of more than 100 industrial facilities including new source air permits, Title V permits, source tests, emission factor development, industrial wastewater permits, direct discharge permits, slug control plans, Lotus Notes training, SPCC plans, SWPP plans and process wastewater treatability studies. While working with Anheuser-Busch Companies, Ms. Roberts was instrumental in development of the Environmental Quality Manual (EQM), a Lotus Notes based environmental data management program that is currently used by multiple industrial entities.

Prior to joining VBA, Ms. Roberts worked in the environmental affairs and engineering departments of Anheuser-Busch Companies and Campbell Taggart, Inc., and as an environmental/process engineer for A.D. Little - Boston, Massachusetts.

Pamela Hesterberg, P.E., Associate

Ms. Hesterberg is a licensed Professional Engineer, holds a masters degree in Civil Engineering and has eight years of environmental engineering and consulting experience. She has participated in over 80 environmental compliance audits and completed over 15 stand-alone environmental applicability determinations for industrial facilities located throughout North America. Additionally, Ms. Hesterberg has completed environmental compliance project for more than 50 industrial facilities including emission inventories, SARA reports, industrial discharge permits, industrial sampling, Phase I assessments, Phase II investigations, groundwater sampling, SPCC/SWPP plans and certifications.

Prior to joining VBA, Ms. Hesterberg worked in the regulatory compliance group of a medium-sized environmental consulting firm and completed a one-year on-site assignment in the environmental compliance department of a large pharmaceutical manufacturing operation.

Heather Stork, P.E., Associate

Ms. Stork is a licensed professional engineer with a Bachelor of Science degree in Geological Engineering. She has eight years of multimedia environmental engineering and consulting

experience. Ms. Stork has participated in and/or led more than 10 environmental compliance audits, including development of the Environmental Compliance Guidance Manual, a regulatory compliance manual for a national healthcare organization with eighty facilities located in twenty states.

Prior to joining VBA, Ms. Stork was Vice President of Compliance Services for a Midwest based environmental engineering and consulting for whom she worked for six years in management roles and as a Geological Engineer. Additionally, Ms. Stork worked as a Geological Engineer for a Southeastern based consulting firm specializing in Department of Defense contracts and Base Realignment and Closure (BRAC) for over one year.

Lynn van Breusegen, P.E., Vice President

Ms. van Breusegen is a licensed professional engineer with masters degrees in Information Systems Management and Business Administration. She has 15 years of engineering, project management, consulting and information systems support experience within industry. Ms. van Breusegen has completed over 20 protocol specific and/or comprehensive compliance audits of industrial and institutional facilities. Ms. van Breusegen is also responsible for the operational and administrative management of VBA, including schedule coordination for professional staff.

Prior to joining VBA, Ms. van Breusegen worked for Anheuser-Busch Companies as a consultant to the Management Systems Group where she managed a team of information systems support personnel, and also worked in various engineering departments of Union Electric Company (now known as AmerenUE).

Jane Whitehouse, CIH, CSP, President – JWA

Ms. Whitehouse has a Master of Science degree in Environmental Health Sciences and is a Certified Industrial Hygienist and Certified Safety Professional. She has over 20 years of experience as a health and safety professional having worked both in industry and as a consultant. She has participated in and/or led over 100 safety and industrial hygiene assessments at industrial, commercial and educational facilities located in North America, Europe and Australia.

Prior to forming JWA, Ms. Whitehouse worked for several major consulting firms as well six years in industry including Exxon Chemicals, Purex Industries and Lockheed Missiles and Space Company.

Auditing / Compliance Tools

All VBA personnel are equipped with portable computers, up-to-date regulations by the Bureau of Natural Affairs (includes all 50 United States and is updated monthly) and portable color printers, providing for a self-sufficient and independent audit team. Unlike many smaller engineering firms, VBA has in-house information systems support provided by Ms. Lynn van Breusegen, P.E., who holds a Master Degree in Management Information Systems and worked in information systems support at Anheuser-Busch Companies prior to joining VBA full-time.

Additionally, selected VBA personnel are members of the Environmental Auditors Roundtable an organization designed to provide certification, awareness, guidance, resources, training, protocols, etc., for environmental auditing professionals.

Allied Auditing Firms

VBA has established formal working relationships with environmental compliance firms throughout the United States and Canada to provide additional auditing personnel for time sensitive, large-scale projects and for health and safety auditing. These relationships have pre-established interoffice rates and agreements providing for seamless delivery of consulting services to clients. Firms with whom VBA has formal agreements include:

- Environmental Compliance & Engineering, Inc. – Aurora, Ohio;
- Kallmeyer Environmental Consulting, Inc. – Covington, Kentucky; and
- JWhitehouse & Associates, Inc. – Troy, New York.

GLOSSARY OF ACRONYMS

CEAG - Community Environmental Advisory Group

CSC - MGE's Central Service Center

DNR - Department of Natural Resources

ECA - Environmental Cooperative Agreement

ECAP - Emission Control Action Plan

EMS - Environmental Management System

FRP - Facility Response Plan

HAPs – Hazardous Air Pollutants

MGE - Madison Gas and Electric Company

MGF - Madison General Fuels

MMSD - Madison Metropolitan Sewerage District

MPAP - Malfunction Prevention and Abatement Plan

PES - Pulsed Energization System

QA/QC Manual - Quality Assurance/Quality Control Manual

SOQ - Statement of Qualifications

SPCC - Spill Prevention, Control, and Countermeasure Plan

SW PPP - Storm Water Pollution Prevention Plan

USEPA - U.S. Environmental Protection Agency

VBA - Van Breusegen & Associates, Inc.

VOCs - Volatile organic compounds

WDNR - Wisconsin Department of Natural Resources

WPDES - Wisconsin Pollution Discharge Elimination System